

From: 73476 Pak, Michael
Sent: Friday, February 18, 2005 12:24 AM
To: STIC-Biotech/ChemLib
Subject: 09/673,133 sequence search

Sequence search - 2 month amendment.
App. #: 09/673,133
Result format: Paper.
Title: transferrin binding protein moraxella.

Please search:

Search commercial and interference databases.

SEQ ID NO: 2, 4, and 6 (all protein)

Top 40 hits.

Thanks,

Mike

2.00 - 706
4.1 - 712
6.00 - 713

Michael Pak
Art Unit 1646
Office: Remsen 4E75
Mailbox: Remsen 4C70
571-272-0879

STAFF USE ONLY

Searcher: _____
Searcher Phone: 2-_____
Date Searcher Picked up: _____
Date Completed: _____
Searcher Prep/Rev. Time: _____
Online Time: _____

Type of Search
NA Sequence: # _____
AA Sequence: # _____
Structure: # _____
Bibliographic: _____
Litigation: _____
Patent Family: _____
Other: _____

Vendors and cost where applicable
STN: _____
DIALOG: _____
QUESTEL/ORBIS: _____
LEXIS/NEXIS: _____
SEQUENCE SYSTEM: _____
WWW/Internet: _____
Other(Specify): _____

Date completed: _____

Searcher: Beverly e 2528

Terminal time: _____

Elapsed time: _____

CPU time: _____

Total time: _____

Number of Searches: _____

Number of Databases: _____

Search Site

_____ STIC

_____ CM-1

_____ Pre-S

Type of Search

_____ N.A. Sequence

_____ A.A. Sequence

_____ Structure

_____ Bibliographic

Vendors

_____ IG

_____ STN

_____ Dialog

_____ APS

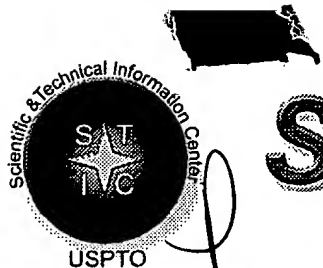
_____ Geninfo

_____ SDC

_____ DARC/Questel

✓ Other CGN

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STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 145514

To: Michael Pak
Location: rem/4e75/4c70
Art Unit: 1646
Thursday, February 24, 2005

Case Serial Number: 09/673133

From: Beverly Shears
Location: Remsen Bldg.
RM 1A54
Phone: 571-272-2528

beverly.shears@uspto.gov

Search Notes

Protein Sequence Searches – February 2005

All of the sequence databases on ABSS have recently been updated.

- Please note that the curators of the UniProt database have purged some temporary accession numbers from the most recent version of UniProt. These sequences have been assigned new permanent accession numbers. The new UniProt record may not contain the previous temporary accession number.
- If you encounter an accession number from an older search run against UniProt (results file extension .rup) that can no longer be found in the database, the permanent record with the new accession number can be found by searching the old accession number in the UniProt Protein Archive database (uniPARC) at:

<http://www.pir.uniprot.org/database/archive.shtml>

If you have any questions regarding this information or your results, please contact any STIC searcher.

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: February 23, 2005, 20:07:47 ; Search time 26.0976 Seconds
(without alignments)
2039.451 Million cell updates/sec

Title: US-09-673-133-6

Perfect score: 3715

Sequence: 1 MKHPLTTLICVAISAVLLTA.....DTDDSKASVVGTKRQGEVK 713

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:*

- 1: /cgm2_6/ptodata/1/iaa/5A.COMB.pap:*
- 2: /cgm2_6/ptodata/1/iaa/5B.COMB.pap:*
- 3: /cgm2_6/ptodata/1/iaa/6A.COMB.pap:*
- 4: /cgm2_6/ptodata/1/iaa/6B.COMB.pap:*
- 5: /cgm2_6/ptodata/1/iaa/PCTUS.COMB.pap:*
- 6: /cgm2_6/ptodata/1/iaa/backfiles1.pap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	3715	100.0	713	4	US-09-059-584-53
2	2718.5	73.2	707	2	US-08-949-941B-2
3	2315	62.3	709	4	US-08-778-570B-15
4	2315	62.3	709	4	US-09-053-584-15
5	2246.5	60.5	706	4	US-09-059-584-46
6	2241.5	60.3	702	3	US-08-613-009A-9
7	2241.5	60.3	702	4	US-08-778-570B-11
8	2241.5	60.3	702	4	US-09-059-584-11
9	2237.5	60.2	702	2	US-08-867-941-25
10	2237.5	60.2	702	3	US-09-074-658-25
11	2218	59.7	689	4	US-08-778-570B-16
12	2218	59.7	689	4	US-09-059-584-16
13	2144.5	57.7	682	3	US-08-613-009A-10
14	2144.5	57.7	682	4	US-08-778-570B-12
15	2144.5	57.7	682	4	US-09-059-584-12
16	2140	57.6	713	4	US-09-059-584-49
17	1929	51.9	712	4	US-09-059-584-51
18	1599	43.0	416	4	US-09-540-236-2388
19	845.5	22.8	601	3	US-08-613-009A-20
20	845.5	22.8	601	4	US-08-778-570B-26
21	845.5	22.8	601	4	US-09-053-584-26
22	841.5	22.7	599	3	US-08-448-194-2
23	841.5	22.7	599	3	US-08-867-921-2
24	834	22.4	598	1	US-08-487-890A-97
25	834	22.4	598	2	US-08-478-435-97
26	834	22.4	598	2	US-08-337-483-97
27	834	22.4	598	2	US-08-478-435-97

Query Match 100.0%; Score 3715; DB 4; Length 713;

28	834	22.4	598	3	US-08-474-671-97	Sequence 97, Appl
29	834	22.4	598	3	US-08-483-577A-97	Sequence 97, Appl
30	834	22.4	598	3	US-08-837-438-97	Sequence 97, Appl
31	834	22.4	598	3	US-08-637-654-97	Sequence 97, Appl
32	834	22.4	598	3	US-08-649-518-97	Sequence 97, Appl
33	828	22.3	578	3	US-08-448-194-61	Sequence 61, Appl
34	828	22.3	578	3	US-08-867-921-61	Sequence 61, Appl
35	824.5	22.2	579	1	US-08-064-174-1	Sequence 1, Appl
36	824.5	22.2	579	1	US-08-066-167-1	Sequence 1, Appl
37	824.5	22.2	579	1	US-08-449-733-1	Sequence 1, Appl
38	824	22.2	662	3	US-09-405-728-3	Sequence 3, Appl
39	791	21.3	593	1	US-07-961-522-4	Sequence 4, Appl
40	791	21.3	593	1	US-08-217-438-4	Sequence 4, Appl
41	791	21.3	593	1	US-08-217-438-5	Sequence 5, Appl
42	791	21.3	593	1	US-08-487-890A-100	Sequence 100, App
43	791	21.3	593	1	US-08-321-978-4	Sequence 4, Appl
44	791	21.3	593	2	US-08-710-584-4	Sequence 4, Appl
45	791	21.3	593	2	US-08-478-435-100	Sequence 100, App

ALIGNMENTS

RESULT 1
US-09-059-584-53
; Sequence 53, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & Mcburney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 53:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-53

Qy 702 VVFGTKRQEVK 713
 Db 695 VVFGARKQEVK 706

RESULT 3

US-08-778-570B-15
 ; Sequence 15, Application US/08778570B
 ; Patent No. 6437096
 ; GENERAL INFORMATION:
 ; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Harkness, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 43
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue
 ; CITY: Toronto
 ; STATE: Ontario
 ; COUNTRY: Canada
 ; ZIP: M5G 1R7
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/778,570B
 ; FILING DATE: 03-JAN-1997
 ; CLASSIFICATION: 536
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Stewart, Michael I
 ; REGISTRATION NUMBER: 24973
 ; REFERENCE/DOCKET NUMBER: 1038-664
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (416) 595-1155
 ; TELEFAX: (416) 595-1162
 ; INFORMATION FOR SEQ ID NO: 15:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 709 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear

US-08-778-570B-15
 Query Match 62.3%; Score 2315; DB 4; Length 709;
 Best Local Similarity 65.3%; Pred. No. 7,2e-150;
 Matches 480; Conservative 77; Mismatches 130; Indels 48; Gaps 15;
 Qy 1 MKHPLTLCVAISAVLITACGG-SGGSNPAPPTIPNAGSAGNAGGTGGTGGTNDV 59
 Db 1 MKHPLTLCVAISAVLITACGGSGGFPNASTIPNAGSAGNAGGTGGTGGTNDV 54
 Qy 60 GNAGSGTGNAGSNGSNGSANTPEPKYODVPTDKNEQVSSIOEPAMGYAMEL 119
 Db 55 ---GGANSAGNAGTGGANSAGSASTPEPKYKDVPTDENKAEVSGIQEPAMGYGVEL 111
 Qy 120 KLRNAHPLNPNKNEAEKRIALDQKDLVAVGDLTNIPFDKNLTLYLKKSSEVWSKFAQ 179
 Db 112 KLRNWP-----QEQEHAKINTNDVKLGGDLKXNPFDSIWQNIKNSKEVQTVYNQE 165
 Qy 180 KGGIEN-----NTRLTHKDLSEQKEAKVKEALDNALTFQAEKYKELIENAHDKSDAR 234
 Db 166 KQIEDQIKRENKQRPDKLDDVAVIEKVLDRLTELAKPIYEKKNINYSHDQKNKAR 225
 Qy 235 NRDLVYKSGNYLSGYTATHDKKTNTYRGYALYKGETAKELPOTSAYKYGYWDFM 294

Db 226 TRDLKYVRSGYIYRSGY-SNIIPKKIARTGFDGALFYGGTQTAKQLPVSQVKYKGTWDFM 284
 Qy 295 TDATLDNKYTDLPGLARQTQWR-SLVSTDEYATLLTDKNKPSDYNAGYHSSSEDFYNFA 353
 Db 285 TDAKKGQSFSGTSGRLAGDRYSAMSYHEYPSLLTDEKKNPDYNGEYHSSSEFTVDFS 344
 Qy 354 DKIKGKLGISNQLSG--TAVTAKERYKIEADIHGNRRFRGSATASDKAEDSKTOHPFTSDA 411
 Db 345 KSLKGBELSSNIQDGHKGSVNNKTKYDIDANIYGNRRFRGSATASDTTEASKSKHPFTSDA 404
 Qy 412 TNKLEGGFYGPKEELAGKFLTDNKLFGVFGAKRDK--VEKTEAILDAYALGTFTN---N 466
 Db 405 KNSLEGGFYGPNAEBELAGKFLTDNKLFGVFGAKRESEAKEKTEAILDAYALGTFTNPKGT 464
 Qy 467-TNKATTTTPTTKOLDNFGNAKLVLGSTVNLVSTDATK--NEFTKFTKDKKTSATNK 524
 Db 465 TNPA--FTANSKKELDNFGNAKLVLGSTVNLVSTDATK--NEFTKFTKDKKTSATNK 517
 Qy 525 AGETLMWYNDVIVKT--YGNFYLKFGELSVGSHSVFLOQERTATTGKAVPTTGKAK 582
 Db 518 AGETLMWYNDVIVKTYGGRNFYKFGELSVGSHSVFLOQERTATTGKAVPTTGKAK 574
 Qy 583 YLGNWVGVI---TGAGTGSFNEAQDIADFDIDFERKSVKGLTTOGRTDPVFNKGEI 638
 Db 575 YLGNWVGVI---TGAGTGSFNEAQDIADFDIDFERKSVKGLTTOGRTDPVFNITQOI 634
 Qy 639 AGNWTGKASTTKADAGYKIDSSSTGKSVIENAEVTTGGFYGNANEMGSGFTHTDSDS 698
 Db 635 AGNWTGTASTAKANVGGYKIDSSSTGKSVIENAKVTGGFYGNANEMGSGFTHTDSDS 694
 Qy 699 KASVFGTKRQEVK 713
 Db 695 KASVFGTKRQEVK 709

RESULT 4

US-09-059-584-15
 ; Sequence 15, Application US/09059584
 ; Patent No. 6440701
 ; GENERAL INFORMATION:
 ; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Harkness, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 60
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue
 ; CITY: Toronto
 ; STATE: Ontario
 ; COUNTRY: Canada
 ; ZIP: M5G 1R7
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/059,584
 ; FILING DATE: 14-APR-1998
 ; CLASSIFICATION:
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/778,570
 ; FILING DATE: 03-JAN-1997
 ; CLASSIFICATION:
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Stewart, Michael I
 ; REGISTRATION NUMBER: 24973
 ; REFERENCE/DOCKET NUMBER: 1038-794

TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 709 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-09-059-584-15

Query Match	62.3%	Score 2315;	DB 4;	Length 709;
Best Local Similarity	65.3%;	Pred. No. 7.2e-150;		
Matches 480; Conservative	77;	Mismatches 130;	Indels 48;	Gaps 15;
QY	1	MKHIPLTTLCAVLSAVLLTACGG-SGGSNPPAPTPIPNAGSAGNAGGTGNTGGTSDNV	59	
DB	1	MKHIPLTTLCAVLSAVLLTACGGSGGFGNPPASTPIPNAGSAGNAGNAGGT-----	54	
QY	60	GNAGGANGSGTGNAAGNSGANGSGTGSANTPPKPYQDVPTDKNEKEQVSSIQEPAMGYAMEL	119	
DB	55	---GGANGSAGNAGGTGGANGSAGSAGSTPPKPYKDVPTDENKKAEVSGIQEPAMGYGVEL	111	
QY	120	KLRNAPLNPKNKEAEKRLALDOKOLVAVEGLTNIIPDKLLIYLLKSKSEVVSKFEAQ	179	
DB	112	KLRNWIPI-----QEQBEHAKLNTDVVLEGLKHNPFDSINQNTKNSKEVQTVVNOE	165	
QY	180	KGGIEN-----NTRLTHKOLSSQEKAEKALDNALTOFAQEKYKELIENAHDKKSDAR	234	
DB	166	KQNIEDQIKENKQRPDKLLDVALQAYIEKVLDDRLLTELAKPIYKNNINSHDKQNKAR	225	
QY	235	NRDLEYVKGFGNYLSGYTATDHDKKTNYRGYYGALYYKGSSETAKELPOTSAYKGYWDFM	294	
DB	226	TRDLKYVRSGYIYRSGY-SNIIIPKIAKTGFDGALFYOGTAKQLPVSQVYKRGTWDFM	284	
QY	295	TDATLDNKKYTDLPGLARQTQWR-SLVSTDEYATLITDKNNKPSDYNGAYGHSSSEFDVFA	353	
DB	285	TDAKKGQSFSGFTSQBLAGDRYSAMSYHYPSSLTDEKNKPNYNGEYGHSSSEFTVDFS	344	
QY	354	DKIKIKGKLIQNLQSG--TAVTAKERYKIEADIHGNRRFRGSATADSKAEDSKTQHPFTSDA	411	
DB	345	KKSLKGLSSNIQDGHKGSVUNKYKRYDIDANIYGNRRFRGSATASDTTEASKSKPFTSDA	404	
QY	412	TNKEGFGYGPKEBELAGKFLTDNKLFGVFGAKRDK--VEKTEAILDAYALGTFN--N	466	
DB	405	KNSLEGGFYGPNAEELAGKFLTDNKLFGVFGAKRSEAKEKTEAILDAYALGTFNPKGT	464	
QY	467	TNKATTPPTKKOLDNFGNAKLLVLGSTVINLVSATDK--NEFTKKFTKDKEPSTATNK	524	
DB	465	TNFA--PTANSKKELDNFGNAKLLVLGSTVIDLVPFGTATKDVNEF-----KEKPSKATNK	517	
QY	525	AGETLMVNDEVIKVT--YGRNFYELKFGELSGVDSHVSFLQGETATTTGEKAVPTTGKAK	582	
DB	518	AGETLMVNDEVIKVTYGYGRNFYELKFGELSIGGSHSVFLQGETA--EKAVPTEGTAK	574	
QY	583	YLGNNWGYI-----TGAGTGGKSFNAEQIADPDDIPERKSVKGKLLTQGTQRTDPVNIKGEI	638	
DB	575	YLGNNWGYITGKDTGTGTGKSFNAEQIADPDDIPERKSVKGKLLTQGTQRTDPVNIITQGI	634	
QY	639	AGNGWTGKATTKADAGYKIDSSSTGKSI VIENAEVTTGGPYGPNANMGGSFTHDTHDDS	698	
DB	635	AGNGWTGATATKANVGKYKIDSSSTGKSI VIENAKVTGGPYGPNANMGGSFTHDTHDDS	694	
QY	699	KASVVFCTKRQOEYK	713	
DB	695	KASVVFCTKROEVK	709	

RESULT 5

RESULTS 3
US-09-059-584-46

US-09-039-384-46
: Sequence 46. Application US/09059584

; sequence 40, Appl. No. 6440701
; Patent No. 6440701

FACEID NO. 0450701
; GENERAL INFORMATION:

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; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
;
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
;
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
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; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
;
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
;
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 706 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
;
; US-09-059-584-46

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Query Match	60.5%;	Score	2246.5;	DB	4;	Length	706;
Best Local Similarity	63.5%;	Pred.	No. 3.4e-145;				
Matches	472;	Conservative	76;	Mismatches	128;	Indels	67;
Gaps	19;						

Qy	1	MKHIPITLTCVAISAVLLTACGSGGSGNPAPTPIPNAGSAGNAGGTGTTGGTGTSTNVG	60
Db	1	MKHIPITLTCVAISAVLLTACGSGGSGNPAPTPIPNAGSGTGTGNTGNAGG---TDN--	55
Qy	61	NAGGANSGTGNAGSGNANSNGTGSANTPEPKYQDVPTDKNEKEQVSSIQEPAMGYAMELK	120
Db	56	-----TANAGTGTGNSGTGSANTPEPKYKDVPTDENKKDEVSGIQEPAMGYGMAIS	107
Qy	121	LRNAHPLNPKNKEAEKRIALDQKDLVAVE-----GDLTNPFP-----DKNILEYLUK	168
Db	108	KMNLH-----KQDPTLDEKDIITLDKQKQVAKGKESPLPFLSDVENKLLDGYIAK	158
Qy	169	SSEVSKFEAKGGIENNTLTHKD--LSSEQEAKYKEALDNALTOFAQ--EKYKELIE	224
Db	159	MN-----EADKNAIGDRIKKDNKDKLSKAEALAKQIKEDVRKS-HEFQVQLSSLKQKIF	211
Qy	225	NAHDKKSDARNRDLVYVKSGF-----NYLSGYTATDHDKTKTYRGGYALYKSGSETAK	278
Db	212	HSNDGTFKATRDLQVVDYGYLVNDNGYLTVTK-----DELWNL-GPVGGVYFNGTTTAK	266
Qy	279	ELP-QTSAKYKGYWDFMTD-ATLDNKYTLDPGIARQTCWRSLVSTDEYATILLTKNNKPS	336
Db	267	ELPTQAVKYKGHWDFMTDVAKQNRPSFEVKENIQAGRYCYGASSKDEYNRLTTDEKNKPE	326
Qy	337	DYNGAYGHSSEFPDVFADKKIKGKLISNQLSGTA--VTAKERYKIEADIHGNRRFGSATA	394

Db 327 RYNGEYGHSSBFTVNFVKDKLTLGELFSLNQLDSRKGNVTTKRYDIDANIYGNRFRGSATA 386
 Qy 395 SDAKEDSKTQHPFTSDATNKLGGFPGKGBELAGKFLTDNKLPGVFGAKRDKV--BKT 452
 Db 387 SDAKASKTGHPFTSDAKNSLEGFGYGNABELAGKFLTDNKLPGVFGAKRESKAGEKT 446
 Qy 453 EAILDAYALGTGPNNTKATFTTPTTKQLDNFGNAKLVGLSTVINLSTDTATKNEFTKK 512
 Db 447 EAILDAYALGTGPNK--NNATTTPTTKQLDNFGNAKLVGLSTVINLSTDTATKNEFTKK 503
 Qy 513 FTKDKPTSATNKAGETLMVNDVIVKT--YGNFEYLFKGBELSGVDSHVSFLOGBERTATT 570
 Db 504 FTKNKPDSATNKAGETLMVNDKVSVKTYGYGRNPEYLFKGBELSGVDSHVSFLOGBERTATT 563
 Qy 571 GEKAVPTTKAKYLGWVGYITGAGTGKSPNEAQDIADFDIDPERKSVKGLTKTCGRTPD 630
 Db 564 GEKAVPTTKAKYLGWVGYITGAGTGKSPNEAQDIADFDIDPERKSVKGLTKTCGRTPD 623
 Qy 631 VFNITGKTAGNWTGKASTTKADAGGYKIDSSSTGKSVIENAEVGTGGFYGNANEMGGS 690
 Db 624 VFNITGKTAGNWTGKASTTKADAGGYKIDSSSTGKSVIENAEVGTGGFYGNANEMGGS 683
 Qy 691 FTHDITDSSKASVVFCTKQOEYK 713
 Db 684 FTHDITDSSKASVVFCTKQOEYK 706

RESULT 6

US-08-613-009A-9
 ; Sequence 9, Application US/08613009A
 ; Patent No. 6090576
 ; GENERAL INFORMATION:
 ; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Harkness, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 31
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue
 ; CITY: Toronto
 ; STATE: Ontario
 ; COUNTRY: Canada
 ; ZIP: M5G 1R7
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/613,009A
 ; FILING DATE: 08-MAR-1996
 ; CLASSIFICATION: 435
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Stewart, Michael I
 ; REGISTRATION NUMBER: 24973
 ; REFERENCE/DOCKET NUMBER: 1038-542
 ; TELEPHONE: (416) 595-1155
 ; TELEFAX: (416) 595-1163
 ; INFORMATION FOR SEQ ID NO: 9:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 702 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear

Query Match 60.3%; Score 2241.5; DB 3; Length 702;

Best Local Similarity 64.9%; Pred. No. 7.5e-145;
 Matches 477; Conservative 70; Mismatches 133; Indels 55; Gaps 21;
 Qy 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPTIPINAGSAGNAGGTGNTGGTSTDVNG 60
 Db 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPTIPINAGSAGNAGGTGNTGGTSTDVNG 55
 Qy 61 NAGGANSCTGAGNSGNSANTPEPKYQVPTDKNEKEQVSSIOEPAMGYAMELK 120
 Db 56 -----TANAGTGTGNSGNTSANTPEPKYQVPTDKNEKEQVSSIOEPAMGYAMELK 107
 Qy 121 LRNAHPLNPNKNKAEKR-IALDQKDLVAVEGDITNIPF-----DKNLIYLLKSSSEVVS 174
 Db 108 KINLH--NRQDTPLDKXNIITLDCKQVA--EGKSPPLPFLSDVENKULDGYIAKN----- 160
 Qy 175 KPEAQKGGIENNTLTHKLSSEOKAEKVEALDNALQTQFAQ--EKYKELIENAHDKKSD 232
 Db 161 --VADKNAIGDRIKKNKEISDELAQIKAEVRKS--HEFOQVLSLENKLIHFNSDNGTTK 217
 Qy 233 ARNRDLVVKSGFNYLS---GYTATDHDKKNYGYGALYYKGETAKELP-QTSAYK 288
 Db 218 ATTRDLKYVDYGY-YLANDGNLYLVTKDLWNL-GPVGGVYFNGTTTAKELPTQDAVYK 275
 Qy 289 GYWFMTD-ATLDNKYTDLPGIARQOTWRSLSVSTDEVATLLTDKNKPSDYNGAYGHSSE 347
 Db 276 GHWFMTDVANRRNRFSEVKENSQAGHYGASSKDEYNRLTKEDSAPDGHSGEYGHSSSE 335
 Qy 348 PDVNFADKKIKGLISN---QLSGTAVTAKERYKIEADIHGNRRFRGSATASDKAEDSKTQ 404
 Db 336 FTVNFEKELTKGLFSLNQLDRHKN-VTKTERYDIDANIHGNRRFRGSATASDKAEDSKTQ 392
 Qy 405 HPFTSDATNKLGGFPGKGBELAGKFLTDNKLPGVFGAKRDK--VEKTEAILDAYALG 462
 Db 393 HPFTSDANRRLEGFGYGPKEELAGKFLTDNKLPGVFGAKRESKAGEKTEAILDAYALG 452
 Qy 463 TENNTKATFTPTTKQLDNFGNAKLVGLSTVINLSTDTATKNEFTKTKDKPTSAT 522
 Db 453 TFNTSN-ATFTPTTEKQLDNFGNAKLVGLSTVIDLVPDATTKNE-----FTKDPESAT 507
 Qy 523 NKAGETLMVNDVIVKTYGKNFEYLFKGBELSGVDSHVSFLOGBERTATTGKAVPTTKAK 582
 Db 508 NEAGETLMVNDVSVKTYGKNFEYLFKGBELSGVDSHVSFLOGBERTATTGKAVPTTKAK 567
 Qy 583 YLGNWVGYI-----TGAGTGKSPNEAQDIADFDIDPERKSVKGLTKTCGRTPDVFNIKEI 638
 Db 568 YLGNWVGYITGKOTGTGTGKSFDTAQDVADFDIDFGNKSVMGLTKTKGRQDPVFSITQOI 627
 Qy 639 AGNGWTGKASTTKADAGGYKIDSSSTGKSVIENAEVGTGGFYGNANEMGGSFTHDITDSS 698
 Db 628 AGNGWTGKASTTKADAGGYKIDSSSTGKSVIENAEVGTGGFYGNANEMGGSFTHDITDSS 687
 Qy 699 KASVVFCTKQOEYK 713
 Db 688 KASVVFCTKQOEYK 702

RESULT 7

US-08-778-570B-11
 ; Sequence 11, Application US/08778570B
 ; Patent No. 6437096
 ; GENERAL INFORMATION:
 ; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Harkness, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 43
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue

QY 121 LRNAHLPLNPNKKEAEKR-IALDOKDLVAVGDLTNIPF-----DKNLEIYKKSSEVVS 174
DB 108 KINLH--NRQDTPLDEKNIITLDGKKQVA-EGKSPLPFSLDVENKLDGVIKKN-- 160
QY 175 KPEAKQGGIENNTLTHKDLSEQKEAKVKEALDNALTOFAQ--EYKELIENAHDKKSD 232
DB 161 --VADKNAIGRIKKNKEISDEELAKQIKEAVRKS-HEFOQVLSLENKIFHSNDGTGK 217
QY 233 ARNRDLVVKSGFNYS---GYTATDHDKKTYRGYGYALYKGSSETAKELP-QTSAYK 288
DB 218 ATTRDLKYVDYGY-YLANDGNLYLTKDKLWNL-GPVGGVFNNGTTAKELPTQDAVYK 275
QY 289 GYWFDMTD-ATLDNKYTDLPGLARQWRSLVSTDEYATLTDKNKPSDYNVGHSSSE 347
DB 276 GHWFDMTDVANNRRNRFSEVKENSQAGWYGGASSKDEYNRLITKEDSAPDGHSGEYGHSSSE 335
QY 348 FDNVFNADKKIKGLISN---QLSGTAVTAKERYKIEADIHGNNRFRGSATASDKAEDSKTQ 404
DB 336 FTVNFKKLTGKLFSLNLDQRHKN-VTKTERYDIDANIHNRRFRGSATASNKNDTSK-- 392
QY 405 HPFTSDATNKLEGGFYGPKGELAGKFLTDNKLFGVFGAKRDK--VEKTEAILDAYALG 462
DB 393 HPFTSDANNRLEGGFYGPKGELAGKFLTDNKLFGVFGAKRESKAEBKTEAILDAYALG 452
QY 463 TFNNNTKATTPPTTKKQLDNFGNAKLVLGSTVINLSTDTATKNEFTKFKTKDKPSTAT 522
DB 453 TFNTSN-ATTFTPTTEKQLDNFGNAKLVLGSTVIDLVPDTATKNE-----FTKDKPESAT 507
QY 523 NKAGETLMVNDDEVIVKTYGKNFYKLFGEISVGSVSHSVFLOGERTATTGEKAVPTTGKAK 582
DB 508 NEAGETLMVNDDEVSVKTYGKNFYKLFGEISVGSVSHSVFLOGERTATTGEKAVPTTGAK 567
QY 593 YLGNWVGVI---TGAGTGKSFNEAQDITADFDIDPERKSVKGLTTCQRTDPVFNKGEI 638
DB 568 YLGNWVGVIITGKDTGTGKSFDAQVADFDIDFGNKSVMGKLTITKGRQDPVFSITQI 627
QY 639 AGNGWTGKASTTKADAGGYKIDSSSTGKSVIENAEVTTGGFYGNANEMGGSFTHDTS 698
DB 628 AGNGWTGASTTKADAGGYKIDSSSTGKSVIENAEVTTGGFYGNANEMGGSFTHDTS 687
QY 699 KASVVFGTKRQOEYK 713
DB 688 KASVVFGTKRQOEYK 702

RESULT 9

US-08-867-941-25
; Sequence 25, Application US/08867941
; Patent No. 597337
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Du, Run-Pan
; APPLICANT: Wang, Quijun
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: LACTOPERRIN RECEPTOR GENES OF MORAXELLA
; NUMBER OF SEQUENCES: 67
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,941
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-681 MJS:jb
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-867-941-25

Query Match 60.2%; Score 2237.5; DB 2; Length 702;
Best Local Similarity 64.8%; Pred. No. 1.4e-144;
Matches 476; Conservative 70; Mismatches 134; Indels 55; Gaps 21;
QY 1 MKHIPLTLCVAISAVLLTACGGSGSNPPRPTPIPNAGSAGNAGGTGNTGCGTSDNVG 60
DB 1 MKHIPLTLCVAISAVLLTACGGSGSNPPRPTPIPNAGSAGNAGGTGNTGCGTSDNVG 55
QY 61 NAGGANGSGTGNAGSGNANSGTGSANTPEPKYQDVPTDKNEKEQVSSIQEPPAMGYAMELK 120
DB 56 -----TANAGNTGTSNAGSGTGSANTPEPKYQDVPTDKNEKEQVSSIQEPPAMGYAMELK 107
QY 121 LRNAHLPLNPNKKEAEKR-IALDOKDLVAVGDLTNIPF-----DKNLEIYKKSSEVVS 174
DB 108 KINLH--NRQDTPLDEKNIITLDGKKQVA-EGKSPLPFSLDVENKLDGVIKKN-- 160
QY 175 KPEAKQGGIENNTLTHKDLSEQKEAKVKEALDNALTOFAQ--EYKELIENAHDKKSD 232
DB 161 --VADKNAIGRIKKNKEISDEELAKQIKEAVRKS-HEFOQVLSLENKIFHSNDGTGK 217
QY 233 ARNRDLVVKSGFNYS---GYTATDHDKKTYRGYGYALYKGSSETAKELP-QTSAYK 288
DB 218 ATTRDLKYVDYGY-YLANDGNLYLTKDKLWNL-GPVGGVFNNGTTAKELPTQDAVYK 275
QY 289 GYWFDMTD-ATLDNKYTDLPGLARQWRSLVSTDEYATLTDKNKPSDYNVGHSSSE 347
DB 276 GHWFDMTDVANNRRNRFSEVKENSQAGWYGGASSKDEYNRLITKEDSAPDGHSGEYGHSSSE 335
QY 348 FDNVFNADKKIKGLISN---QLSGTAVTAKERYKIEADIHGNNRFRGSATASDKAEDSKTQ 404
DB 336 FTVNFKKLTGKLFSLNLDQRHKN-VTKTERYDIDANIHNRRFRGSATASNKNDTSK-- 392
QY 405 HPFTSDATNKLEGGFYGPKGELAGKFLTDNKLFGVFGAKRDK--VEKTEAILDAYALG 462
DB 393 HPFTSDANNRLEGGFYGPKGELAGKFLTDNKLFGVFGAKRESKAEBKTEAILDAYALG 452
QY 463 TFNNNTKATTPPTTKKQLDNFGNAKLVLGSTVINLSTDTATKNEFTKFKTKDKPSTAT 522
DB 453 TFNTSN-ATTFTPTTEKQLDNFGNAKLVLGSTVIDLVPDTATKNE-----FTKDKPESAT 507
QY 523 NKAGETLMVNDDEVIVKTYGKNFYKLFGEISVGSVSHSVFLOGERTATTGEKAVPTTGKAK 582
DB 508 NEAGETLMVNDDEVSVKTYGKNFYKLFGEISVGSVSHSVFLOGERTATTGEKAVPTTGAK 567
QY 593 YLGNWVGVI---TGAGTGKSFNEAQDITADFDIDPERKSVKGLTTCQRTDPVFNKGEI 638
DB 568 YLGNWVGVIITGKDTGTGKSFDAQVADFDIDFGNKSVMGKLTITKGRQDPVFSITQI 627
QY 639 AGNGWTGKASTTKADAGGYKIDSSSTGKSVIENAEVTTGGFYGNANEMGGSFTHDTS 698
DB 628 AGNGWTGASTTKADAGGYKIDSSSTGKSVIENAEVTTGGFYGNANEMGGSFTHDTS 687
QY 699 KASVVFGTKRQOEYK 713
DB 688 KASVVFGTKRQOEYK 702

RESULT 10

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US-09-074-658-25
; Sequence 25, Application US/09074658
; Patent No. 6184371
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Run-Pan Du
; APPLICANT: Quijun Wang
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: LACTOFERRIN RECEPTOR GENES OF MORAXELLA
; NUMBER OF SEQUENCES: 78
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; FILING DATE: 08-MAY-1998
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-795
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-074-658-25
Query Match 60.2%; Score 2237.5; DB 3; Length 702;
Best Local Similarity 64.8%; Pred. No. 1.4e-144;
Matches 476; Conservative 70; Mismatches 134; Indels 55; Gaps 21;

Qy 1 MKHIPPLTLCVAISAVLLTACGGSGSNPPAPTIPNAGSAGNAGGTGNTGGTSDNVG 60
Db 1 MKHIPPLTLCVAISAVLLTACGGSGSNPPAPTIPNAGSAGNAGGTGNTGNAGG---TDN-- 55

Qy 61 NAGGANSCTGNAGSGNANSCTGNTPEPKYQDVPTDKNEKQVSSIQEPAMGYAMELK 120
Db 56 -----TANAGNTGGTSGTGSANTPEPKYQDVPTDKNEKQVSSIQEPAMGYGVALS 107

Qy 121 LRNAPLNPKNKAEKE-IALDQKDLVAVBGDLTNIPF-----DKNLIYLKSSSEYVS 174
Db 108 KINLH--NRQTPLEKNIITLDGKQVA-EGKSPFPFLDVENKLLDGYIAKNW--- 160

Qy 175 KPEAQKGIEENRTHLDLSSQEKAKVKALDNALTOFAQ--EKYKELIENAHDKSD 232
Db 161 --VADKNAIGRIKKNKEISDEELAKQIKEAVRKS-HEFOQVLSLLENKIFHSNDGTTK 217

Qy 233 ARNRDLVVKGFNYS---GYTATDHDKNTNYGYGALYKGSSETAKLP-QTSAKYK 288
Db 218 ATTRDLKVDYGY-YLANDGNLYLVTKDKLWNL-GPVGGVFYNGTTTAKELPTQDAVKYK 275

Qy 289 GYWDFTMD-ATLDNKYDLPGLARQWRSLVSTDEYATLLTDKNKPSDYNAGYHSSE 347
Db 276 GHWDFMTDVANRRNPFSEKNSQAGWYGYGASSKDEYNRLITKEDSAPDGHSGEYHSSE 335

Qy 348 FDNVADKKIKGKLISN---QLSGPNTAKERYKIEADHGNRFRGSATASDKAEDSKTQ 404
Db 336 FTVNFKEKKLTKGLFSLNLDQRHKN-VTKTERYDIDANIHGNRFRGSATASGNKNDTSK-- 392

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Qy 405 HPFTSDATNKLEGGFYGPKGEELAGKELTDNKNLFGVFGAKRDK--VEKTEAILDAYALG 462
Db 393 HPFTSDANNRLEGGFYGPKGEELAGKELTDNKNLFGVFGAKRESKAEKTEAILDAYALG 452

Qy 463 TFNNVTKATFTPTTKQLDNFGNAKKLVLGSTVINLVSTDAVKNVETKPKTKDKPPTSAT 522
Db 453 TFNTSN-ATTFTPTTKQLDNFGNAKKLVLGSTVIDLVPTDATKNE---FTKDKPESAT 507

Qy 523 NKAGETLMVNDVIVTKYGNFEYLKFGELSVGDSHVSFLOGERTATTGEKAVPTTGKAK 582
Db 508 NEAGETLMVNDVSVTKYGNFEYLKFGELSIGGSHVSFLOGERTATTGEKAVPTTGAK 567

Qy 583 YLGNWVGVI---TGAGTGKSFNEAQAIDFDIDFERKSVKGKLTTOGRDTPVFNKGEI 638
Db 568 YLGNWVGVIITGKDTGTGTSFTDAQDVADFDIDFGNKSVSGLKITKGRQDPVFSITQI 627

Qy 639 AGNGWTGASTTKADAGGYKIDSSSTOKSVIENAEVTTGGFYGNANEMGGSFTHDTHDS 698
Db 628 AGNGWTGASTTKADAGGYKIDSSSTGKSIKADANVTGGFYGNANEMGGSFTHNADDS 687

Qy 699 KASVVFCTKQOEYK 713
Db 688 KASVVFCTKQOEYK 702

RESULT 11
US-08-778-570B-16
; Sequence 16, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 16:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 689 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-778-570B-16
Query Match 59.7%; Score 2218; DB 4; Length 689;
Best Local Similarity 64.3%; Pred. No. 2.9e-143;

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Matches 460; Conservative 77; Mismatches 130; Indels 48; Gaps 15;
Qy 21 CGG-SGGSNPAPPIPNAGSAGNAGTGTGTGTSTDNVGNAGGAGTGNAGSNGNAN 79
Db 1 CGGSGGGFNPASTPIPNAGSAGNAGNAGGT-----GCANSAGNAGGTGGAN 51
Qy 80 SGTGSANTPEPKYQDVPTDKNEKEQVSSIQEPAMGYAMELKLRNAHPLNPNKNEAEKRI 139
Db 52 SGAGSASTPEPKYKDVPTDENKKAESVGIQEPAMGYGVVELKLRNWP-----QEQEHA 105
Qy 140 ALDQKDLVAVEGDLTNIPFDKNLIYELKKSSEVVSKEFPAQKGGIEN-----NTRLTHKDL 194
Db 106 KINTNDVVKLEGLKHNPFDSIWQNIKNSKEVQTVVYVQEKQNIQDKRENKQRPDKKL 165
Qy 195 SSEQKEAKVEALDNALTPAQEKYKELIENAHDKSDARNRDLEYVKGSGNYLSGYTAT 254
Db 166 DDVALQAYIEKVLDDRLTELAKPIYEKNINSHDKQNKARTDLKYVRSGYIYRSY-SN 224
Qy 255 DHDKKTNVRYGYGALYYKGSSETAKELPQTSKAKYGYWDFMTDNLNKTDLPGIARQTQ 314
Db 225 IIPKKIAGTGDGALFYOGTQAKQLPVQSQYKYGTDWDFMTDAKKGQSFSGTSGRLAG 284
Qy 315 WR-SLVSSTDEYATLLTDKNKPSDNGAYGHSSEFDVNFADKKIKGLISNQLSG--TAV 371
Db 285 DRYSAMSYHEYPSSLTDEKNKPDNYNGEYGHSSSEFTVDFSKSLKGLSSNIQDGHKGSV 344
Qy 372 TAKERYKIEADIHGNRFRGSATSDKAEDSKTQHPFTSDATNKLEGGFYGPKGBELAGKF 431
Db 345 NKTTRYDIDANIYGNRFRGSATSDTTASKSKHPFTSDAKNSLEGGFYGNABELAGKF 404
Qy 432 LTDDNKLFGVFGAKRDK--VEKTEAILDAYALGTGN---NTNKATTTPTTKKOLDNFGN 486
Db 405 LTNDNKLFGVFGAKRESEAKSEKTEAILDAYALGTGNKPGTNPAA--FTANSKGLDNFGN 462
Qy 487 AKKLVLSGTVNLVSTDATK--NEFTKTKDKPSTATNKAGETLMWVDEIVKTV--YKG 542
Db 463 AKKLVLSGTVNLVPTGATKDVNEF-----KEKPSATNKAGETLMWVDEIVKTVYGR 517
Qy 543 NFEYLFKFGELSVGDSHVSFLQERTATTGKAVPTTGKAKYLGWVGYI-----TCAGTGK 598
Db 518 NFEYLFKFGELSIGGSHVSFLQERTATA---EKAVPTGTAKYLGWVGYITKDTGTSTGK 574
Qy 599 SFNEAQDIADFDIDPERKSVKGLTQGRTPDVPVNIKEIAGNWTGKASTTKADAGGYK 658
Db 575 SFNEAQDIADFDIDPERKSVKGLTQGRTPDVPVNIQGIAGNWTGTAATAKANVGSGYK 634
Qy 659 IDSSTGKSIIVENAEVGTGGFVGNANEMGSGFTHTDSDSKASVVFVGTGKROEYK 713
Db 635 IDSSTGKSIIVENAKVTGGFVGNANEMGSGFTHTDSDSKASVVFVGTGKROEYK 689

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RESULT 12
US-09-059-584-16
; Sequence 16, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:

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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/059,584
FILING DATE: 14-APR-1998
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/778,570
FILING DATE: 03-JAN-1997
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24973
REFERENCE/DOCKET NUMBER: 1038-794
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 689 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-09-059-584-16

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Query Match 59.7%; Score 2218; DB 4; Length 689;
Best Local Similarity 64.3%; Pred. No. 2.9e-143;
Matches 460; Conservative 77; Mismatches 130; Indels 48; Gaps 15;
Qy 21 CGG-SGGSNPAPPIPNAGSAGNAGTGTGTGTSTDNVGNAGGAGTGNAGSNGNAN 79
Db 1 CGGSGGGFNPASTPIPNAGSAGNAGNAGGT-----GCANSAGNAGGTGGAN 51
Qy 80 SGTGSANTPEPKYQDVPTDKNEKEQVSSIQEPAMGYAMELKLRNAHPLNPNKNEAEKRI 139
Db 52 SGAGSASTPEPKYKDVPTDENKKAESVGIQEPAMGYGVVELKLRNWP-----QEQEHA 105
Qy 140 ALDQKDLVAVEGDLTNIPFDKNLIYELKKSSEVVSKEFPAQKGGIEN-----NTRLTHKDL 194
Db 106 KINTNDVVKLEGLKHNPFDSIWQNIKNSKEVQTVVYVQEKQNIQDKRENKQRPDKKL 165
Qy 195 SSEQKEAKVEALDNALTPAQEKYKELIENAHDKSDARNRDLEYVKGSGNYLSGYTAT 254
Db 166 DDVALQAYIEKVLDDRLTELAKPIYEKNINSHDKQNKARTDLKYVRSGYIYRSY-SN 224
Qy 255 DHDKKTNVRYGYGALYYKGSSETAKELPQTSKAKYGYWDFMTDNLNKTDLPGIARQTQ 314
Db 225 IIPKKIAGTGDGALFYOGTQAKQLPVQSQYKYGTDWDFMTDAKKGQSFSGTSGRLAG 284
Qy 315 WR-SLVSSTDEYATLLTDKNKPSDNGAYGHSSEFDVNFADKKIKGLISNQLSG--TAV 371
Db 285 DRYSAMSYHEYPSSLTDEKNKPDNYNGEYGHSSSEFTVDFSKSLKGLSSNIQDGHKGSV 344
Qy 372 TAKERYKIEADIHGNRFRGSATSDKAEDSKTQHPFTSDATNKLEGGFYGPKGBELAGKF 431
Db 345 NKTTRYDIDANIYGNRFRGSATSDTTASKSKHPFTSDAKNSLEGGFYGNABELAGKF 404
Qy 432 LTDDNKLFGVFGAKRDK--VEKTEAILDAYALGTGN---NTNKATTTPTTKKOLDNFGN 486
Db 405 LTNDNKLFGVFGAKRESEAKSEKTEAILDAYALGTGNKPGTNPAA--FTANSKGLDNFGN 462
Qy 487 AKKLVLSGTVNLVSTDATK--NEFTKTKDKPSTATNKAGETLMWVDEIVKTV--YKG 542
Db 463 AKKLVLSGTVNLVPTGATKDVNEF-----KEKPSATNKAGETLMWVDEIVKTVYGR 517
Qy 543 NFEYLFKFGELSVGDSHVSFLQERTATTGKAVPTTGKAKYLGWVGYI-----TCAGTGK 598
Db 518 NFEYLFKFGELSIGGSHVSFLQERTATA---EKAVPTGTAKYLGWVGYITKDTGTSTGK 574
Qy 599 SFNEAQDIADFDIDPERKSVKGLTQGRTPDVPVNIKEIAGNWTGKASTTKADAGGYK 658

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Db 575 SFNEAQDIADFDIDFERKSVKGLTTOGRQDPVFNITGQIAGNGWTGTASTAKANVGKYK 634
Qy 659 IDSSTGKSIIVENAEVTTGGFYGNANEMGGSFTHDSTDSDSKASVVFGTGKQOEYK 713
Db 635 IDSSTGKSIIVENAKVTGGFYGNANEMGGSFTHDSTDSDSKASVVFGTGKQOEYK 689

RESULT 13
US-08-613-009A-10
; Sequence 10, Application US/08613009A
; Patent No. 6090576
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/613.009A
; FILING DATE: 08-MAR-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-542
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 682 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-613-009A-10

Query Match 57.7%; Score 2144.5; DB 3; Length 682;
Best Local Similarity 63.9%; Pred. No. 3e-138;
Matches 457; Conservative 70; Mismatches 133; Indels 55; Gaps 21;

Qy 21 CGSGGSPNPAPTPTPNAGSAGNAGTGTGCTGSDNVGNAGGANSGTGNAGNSNANS 80
Db 1 CGSGGSPNPAPTPTPNAGSAGNAGTGTGCTGSDNVGNAGGANSGTGNAGNSNANS 47

Qy 81 GTGSANTPEPKYQDVPTDKNEQVSSIOEPAMGYAMELKLRLNAHPLNPNKNKEAEKR-I 139
Db 48 GTGSANTPEPKYQDVPTKEKDKVSSIOEPAMGYAMLSKINLH--NRQDTPLDEKNII 105

Qy 140 ALDQKDLVAVGDLTNIPF-----DKNLIEYLKXSEVSVKFEAQKGGIENNTRLTHKDL 194
Db 106 TLDGKKQVA-BGKKSPLPFLSDVENKLLDGYIAKN-----VADKNAIGDRIKKNGKEI 158

Qy 195 SSEQKEAKKALDNALTOFAQ--EYKELIENAHDKKSDARNRDLEYVKSFPNLS---- 249
Db 159 SDELAQIKKAVRKS-HEFOQVLSLENKIFHNSDGTTKATRDLYKDYDYG-YLANDG 216

Qy 250 GYTATDHDKKTNYRGYGYALYYKGSSETAKELP-QTSKYYKGYWDFMTD-ATLDNKYTDLP 307

Db 217 NYLTVTKDKLWNL-GPVGGVYFNGTITAKELPTQDAVKYKGHMDFTMDVANRRNRFSVVK 275
Qy 308 GIARQOTOWRSLSVSTDEYATLLTDKNKPSYNGAYGHSSEFDVNFADKKIKGKLISN--- 364
Db 276 ENSQAGHYIYASSKDEYNRLITKEDSAPDGHSGEYGHSSFTVNFKEKKLTGKLFSLQD 335
Qy 365 QLSGTAVTAKERYKIEADIHGNRPRGSATASDKAEDSKTOHPFTSDATNKLGGFYGPKG 424
Db 336 RHKGN-VTKTERYDIDANIHGFRGRSATASKNKNDTSK--HPPTSDANNRLEGGFYGPKG 392
Qy 425 BELAGKFLTDNKLFGVFGAKRDK--VEKTEALIDAYALGTFNNTNKATFTPTTKQLD 482
Db 393 BELAGKFLTDNKLFGVFGAKRESKABEKEATEALIDAYALGTFTNSN-ATFTPTTKQLD 451
Qy 483 NFGNAKKLVLGSTVINLVSTDATKNEFTKKTOKPDSATNKAGETLMVNDDEVVKTYGK 542
Db 452 NFGNAKKLVLGSTVIDLVPTDATKNE-----FTKDKPESATNEAGETLMVNDDEVVKTYGK 507
Qy 543 NFEYLKFGELSVGDSHSVFLOQERTATTGKAVPTTGKAKYLGNNVGYI-----TGAGTGK 598
Db 508 NFEYLKFGELSIGGSHSVFLQERTATTGKAVPTTGKAKYLGNNVGYITGKDTGTGTGK 567
Qy 599 SFNEAQDIADFDIDFERKSVKGLTTOGRQDPVFNITGQIAGNGWTGTASTKADAGYK 658
Db 568 SFTDAQDVADFDIDFGNKSVSGLITKGRQDPVFSITGQIAGNGWTGTASTKADAGYK 627
Qy 659 IDSSTGKSIIVENAEVTTGGFYGNANEMGGSFTHDSTDSDSKASVVFGTGKQOEYK 713
Db 628 IDSSTGKSIIVKANVTGGFYGNANEMGGSFTHNADDSKASVVFGTGKQOEYK 682

RESULT 14
US-08-778-570B-12
; Sequence 12, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778.570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 682 amino acids
; TYPE: amino acid

STRANDEDNESS: single
TOPOLOGY: linear
US-08-778-570B-12

Query Match 57.7%; Score 2144.5; DB 4; Length 682;
Best Local Similarity 63.9%; Pred. No. 3e-138;
Matches 457; Conservative 70; Mismatches 133; Indels 55; Gaps 21;

Qy 21 CGSGGNNPPAPTPIPNAGSAGNAGGTGNTGCTGTDVGNAGGANSSTGNAGSGNANS 80
Db 1 CGSGGNNPPAPTPIPNAGSAGNAGGTGNTGCTGTDVGNAGGANSSTGNAGSGNANS 47
Qy 81 GTGSANTPEPKYQDVPTDKNEKEQVSSIQBPAMGYAMELKLNRNAPLNPNKNAEKR-I 139
Db 48 GTGSANTPEPKYQDVPTDKNEKEQVSSIQBPAMGYAMELKLNRNAPLNPNKNAEKR-I 105
Qy 140 ALDQKDLVAVGDLTNIPF-----DKNLI EYLKXSEVSVKFEAQKGIEINNTLTHKOL 194
Db 106 TLDGKKQVA-EGKKSPLPFLSDVENKLDGVIKMN-----VADKNAIGDRKKNKEI 158
Qy 195 SSEQEAKVKEALDNLATQFAQ--EYKELIENAHDKSDARNRDLEVYKSGFNYS--- 249
Db 159 SDEBLAQI KEAVRKS--HEFOQVLSLENKIFHSNDGTTKATTRDLKYVDYGY-YLANDG 216
Qy 250 GYTATDHDKNTYRGYGYALYKGYSETAKELP--OTS AKYGYWDFMTD--ATLDNKYTDLP 307
Db 217 NYLTKVTDKLNWL--GPVGGVYFNGTTAKELPTQDAVKYKGHWDFMTDVANRRNFSEVK 275
Qy 308 GIARQOTWRSILVSTDEYATLLTDKNKPSDYNAGYHSSSEFVNADKIKGKLIN--- 364
Db 276 ENSQAGWYGYGASSKDEYNRLTKEDSAPDGHSGEYHSSSEFVNADKIKGKLIN--- 335
Qy 365 QLSGTAVTAKERYKIEADHGNRFRGSATASDKAEDSKTOHPPTSDATNKGEGFYGPKG 424
Db 336 RHKGN-VTKTERYDIDANIHGNNRFRGSATASDKAEDSKTOHPPTSDATNKGEGFYGPKG 392
Qy 425 BELAGKELTDNKLFGVFGAKRDK--VEKTEAILDAVALGTFNNTKATTPPTKKOLD 482
Db 393 BELAGKELTDNKLFGVFGAKRDK--VEKTEAILDAVALGTFNNTKATTPPTKKOLD 451
Qy 483 NFGNAKLVLGSTVINLSTDAKNEFTKFKTDKPTSATNKGAGETLMVNDDEVSVKTYGK 542
Db 452 NFGNAKLVLGSTVINLSTDAKNEFTKFKTDKPTSATNKGAGETLMVNDDEVSVKTYGK 507
Qy 543 NFEYKFGELSVGDSHVSFLQERTATTTGKAVPTTGKAKYKLNWVGI-----TGAGTKG 598
Db 508 NFEYKFGELSVGDSHVSFLQERTATTTGKAVPTTGKAKYKLNWVGI-----TGAGTKG 567
Qy 599 SFNEAQDIADFDIFERKSVKGLTTOGRTDPVNIKEIAGNGWTGKASTTKADAGYK 658
Db 568 SFTDAQDVADFDIDFGNKSVSGLITKGRQDPVFSITQIAGNGWTGKASTTKADAGYK 627
Qy 659 IDSSTGKSVIENAEVGGFYGNANEMGGSFTHDTSKASVVFQKROQEVK 713
Db 628 IDSSTGKSVIENAEVGGFYGNANEMGGSFTHDTSKASVVFQKROQEVK 682

RESULT 15

US-09-559-584-12
Sequence 12, Application US/09059584
Patent No. 6440701

GENERAL INFORMATION:

APPLICANT: Myers, Lisa E
APPLICANT: Schryvers, Anthony B
APPLICANT: Harkness, Robin E
APPLICANT: Loosmore, Sheena M.
APPLICANT: Du, Run-Pan
APPLICANT: Yang, Yan-Ping
APPLICANT: Klein, Michel H
TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney

STREET: 6th Floor, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/059,584
FILING DATE: 14-APR-1998
CLASSIFICATION:
PRIOR APPLICATION DATA: US 08/778,570
FILING DATE: 03-JAN-1997
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24973
REFERENCE/DOCKET NUMBER: 1038-794
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 682 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-09-059-584-12

Query Match 57.7%; Score 2144.5; DB 4; Length 682;
Best Local Similarity 63.9%; Pred. No. 3e-138;
Matches 457; Conservative 70; Mismatches 133; Indels 55; Gaps 21;

Qy 21 CGSGGNNPPAPTPIPNAGSAGNAGGTGNTGCTGTDVGNAGGANSSTGNAGSGNANS 80
Db 1 CGSGGNNPPAPTPIPNAGSAGNAGGTGNTGCTGTDVGNAGGANSSTGNAGSGNANS 47
Qy 81 GTGSANTPEPKYQDVPTDKNEKEQVSSIQBPAMGYAMELKLNRNAPLNPNKNAEKR-I 139
Db 48 GTGSANTPEPKYQDVPTDKNEKEQVSSIQBPAMGYAMELKLNRNAPLNPNKNAEKR-I 105
Qy 140 ALDQKDLVAVGDLTNIPF-----DKNLI EYLKXSEVSVKFEAQKGIEINNTLTHKOL 194
Db 106 TLDGKKQVA-EGKKSPLPFLSDVENKLDGVIKMN-----VADKNAIGDRKKNKEI 158
Qy 195 SSEQEAKVKEALDNLATQFAQ--EYKELIENAHDKSDARNRDLEVYKSGFNYS--- 249
Db 159 SDEBLAQI KEAVRKS--HEFOQVLSLENKIFHSNDGTTKATTRDLKYVDYGY-YLANDG 216
Qy 250 GYTATDHDKNTYRGYGYALYKGYSETAKELP--OTS AKYGYWDFMTD--ATLDNKYTDLP 307
Db 217 NYLTKVTDKLNWL--GPVGGVYFNGTTAKELPTQDAVKYKGHWDFMTDVANRRNFSEVK 275
Qy 308 GIARQOTWRSILVSTDEYATLLTDKNKPSDYNAGYHSSSEFVNADKIKGKLIN--- 364
Db 276 ENSQAGWYGYGASSKDEYNRLTKEDSAPDGHSGEYHSSSEFVNADKIKGKLIN--- 335
Qy 365 QLSGTAVTAKERYKIEADHGNRFRGSATASDKAEDSKTOHPPTSDATNKGEGFYGPKG 424
Db 336 RHKGN-VTKTERYDIDANIHGNNRFRGSATASDKAEDSKTOHPPTSDATNKGEGFYGPKG 392
Qy 425 BELAGKELTDNKLFGVFGAKRDK--VEKTEAILDAVALGTFNNTKATTPPTKKOLD 482
Db 393 BELAGKELTDNKLFGVFGAKRDK--VEKTEAILDAVALGTFNNTKATTPPTKKOLD 451
Qy 483 NFGNAKLVLGSTVINLSTDAKNEFTKFKTDKPTSATNKGAGETLMVNDDEVSVKTYGK 542
Db 452 NFGNAKLVLGSTVINLSTDAKNEFTKFKTDKPTSATNKGAGETLMVNDDEVSVKTYGK 507

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Qy 543 NFEYLKFGELSVGSHSVFLQGERATTGKAVPTTGKAKYLGNNVGYI-----TGAGTGK 598
Db 508 NFEYLKFGELSTGGSHSVFLQGERATTGKAVPTTGKAKYLGNNVGYITGKDTGTGTGK 567
Qy 599 SFNEAQDIDIDFERKSVKGLTTQGRTPPVFNKGEIAGNGWTGKASTTKADAGGYK 658
Db 568 SFTDAQDVADFDIDFGNKSVSGLTKRQDPVFSITGQIAGNGWTGTAFTTKADAGGYK 627
Qy 659 IDSSTGKSVIENAEVTFGGYGPANEMGGSFTHDTSKASVVFGTKRQGEVK 713
Db 628 IDSSTGKSVIKOANVTGGYGPANEMGGSFTHNADDSKASVVFGTKRQGEVK 682

RESULT 16
US-09-059-584-49
; Sequence 49, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
;
Query Match 57.6%; Score 2140; DB 4; Length 713;
Best Local Similarity 62.4%; Pred. No. 6,5e-138;
Matches 467; Conservative 70; Mismatches 141; Indels 70; Gaps 23;

Qy 1 MKHIPLTLCVAISAVLLTACGGSGGNPPAPTIPNAGSAGNAGGTGNTGGTSTDVNG 60
Db 1 MKHIPLTLCVAISAVLLTACGGSGGNPPAPTIPNAGSAGNAGGTGNTGGTSTDVNG 55
Qy 61 NAGGANGSTGNAGSGNANSSTGSAANTPEPKYQDVPTDKNEKEQVSSIQEPAMGYAMELK 120
Db 56 -----TANAGTGGTSSGTSGASTSEPKYQDVPTTPNNKEQVSSIQEPAMGYAMALS 107
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Qy 121 LRNAH-----PLPNKNKEAEKRIALDQKDLVAVEGDLTNIPF-----DKNLIYLYLKSS 170
Db 108 KINLYDQODTFL-----DAKNIITLDGKQVA-DNOKSPLFPFLDVENKLLDGYIAOM 160
Qy 171 EVWSKFAQKGGIENNTLTHKOLSSQKEAKVKEALDNALTOFAQ--EKYKELIENAH 228
Db 161 EADNVAIGERIKRENE---QNKKISDEBELAKKIKENVRKS-PEFQOVLSSIKAKTFFHSND 216
Qy 229 KKSAPARNRDLBYKSGF-----NYLSGYTATDHDKNTNRYGYGALYYKSGSETAKELP- 281
Db 217 KTKATTRDLKYDYGYLVNDANYLT--VKTDPKLWN-SGPVGGVYNGSTTAKELPT 273
Qy 282 QTSARYGYWDFMTD-ATLDNKYTDLFCIARQTORSLVSTDEYATLLTDKNKPSDYNG 340
Db 274 QDAVKYKGHWDFMTDVAKKRNRFPSEVKETQAGWMYGASSKDEYNRLLTAKADAAPDNYSG 333
Qy 341 AYGHSSSEFDVNFADKKIKGLISNQLSG--TAVTAKERYKIEADIHGNNRPRGSATASDKA 398
Db 334 EYGHSSSEFTVNFKEKLTGELFSLQDSHKQKVTTKRYDIKADIHGNRPRGSATATDKA 393
Qy 399 EDSKTOHPFTSDATNKLEGGFYGPKEGELAGKPLTDDNKLFGVFGAKRD-KVEKTEALTD 457
Db 394 EDSKSKHPFTSHAKDKLEGGFYGPKEGELAGKPLTDDNKLFGVFGAKGEGNVEKTEALTD 453
Qy 458 AYALGTFN---NTNKATTPFTTKQLDNFGNAKLVLGSTVINLVSTDATK--NEFTTK 512
Db 454 AYALGTFNKPGTTNPA--FTANSKKELDNFGNAKLVLGSTVIDLVPTDATKDVNEP--- 508
Qy 513 FTKDKPTSATNKAGETLWVNDDEVIVKTYGNFNFYKFGELSVGDSHVSFLQGERATTGGE 572
Db 509 --KEKPKSATNKAGETLWVNDDEVSVKTYGNFNFYKFGELSVGDSHVSFLQGERATTGGE 566
Qy 573 KAVPTTGKAKYLGNNVGYITGAGT-----GKSFNEAQDIDIDFERKSVKGLTTQG 626
Db 567 KAVPTTGKAKYLGNNVGYITGAGSSKSGTDCGKFTDAKDIDFERKSVNGKLTTKD 626
Qy 627 RTDPVFNKGEIAGNGWTGKASTTKADAGGYKIDSSSTGKSVIENAEVTFGGYGPANANE 686
Db 627 RQDPVFNITGEIAGNGWTGKASTAEANAGGYKIDSSSTGKSVIKDAVVTGTFYGPANATE 686
Qy 687 MGSFTHDIT-DDSKASVVFGTKRQGEVK 713
Db 687 MGSFTHNSGNDGKSVVFGTKK-QEVK 713

RESULT 17
US-09-059-584-51
; Sequence 51, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
;
Query Match 57.6%; Score 2140; DB 4; Length 713;
Best Local Similarity 62.4%; Pred. No. 6,5e-138;
Matches 467; Conservative 70; Mismatches 141; Indels 70; Gaps 23;
```

FILING DATE: 14-APR-1998
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/778,570
FILING DATE: 03-JAN-1997
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 1038-794
REFERENCE/DOCKET NUMBER: 1038-794
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 51:
SEQUENCE CHARACTERISTICS:
LENGTH: 712 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-09-059-584-51

Query Match 51.9%; Score 1929; DB 4; Length 712;
Best Local Similarity 54.5%; Pred. No. 1.6e-123;
Matches 402; Conservative 104; Mismatches 180; Indels 52; Gaps 15;

Qy 1 MKGHPITLCAISAVLITACGGSGSNPPATPIPNAGSAGNAGCTGCTGSTDNVG 60
Db 1 MKGHPITLCAISAVLITACGGSGSNPPATPIPNAGSAGNAG--SGTGGAGSTDN-- 56
Qy 61 NAGGANSCTGNAGNSGNSANTPEPKYQDVPTDKNEKVOSSIOEPAMGYAMELK 120
Db 57 -----AANAGSTGGASSGTGASSTOKPKYQDVPTDKNKDEVSGIOEPAMGYVBLK 108
Qy 121 LRNAPLNPKNKEAKRIALDOKDLVAVGDLTNIPDKNLIEYLKSSSEVWSKFEAQK 180
Db 109 LRNWIP-----QEQEERHAKINTNDVVKLGDLKHPNFDNSIQWNIKNSKEVQTVYNQEK 162
Qy 181 GGIENNTLTHKLSSEQKEAKVEALDVALTOFAQEKYKELIENAHDKKSDARNRLEY 240
Db 163 QNIENQIKENKELDKALKALIEKVDLYLTSLAKPTIYERNINDSHDKQNKARTDRLKY 222
Qy 241 VKSGNYLSGYTATDHDKNTYRGYGYALYKYGSETAKELPQTSKAKYGYDEMTDATLD 300
Db 223 VRSGYIYRSYNSNDIQKIAKTGPDGALFYGTQTAKQLPVSVEKYVGTWDFMDAKKG 282
Qy 301 NKYTDLPGIARQOWRSLVSTDEVATLLTDKNKPSDYNAGYHSSSEFDVNFADKKIKGK 360
Db 283 QSFSSFE--RRAGDRYSAMSSSHEYPSSLITDDKNKPDNDYNDVGHSSSEFTVDFSKSLTGG 340
Qy 361 LISN--QLSGTAVTAKERYKIEADHGNRFRGSATASDKAEDSKTOHPFTSDATNKGEG 418
Db 341 LFSNLQDHHKGVTKTKRYDINARHGNRFRGSATAINKNDESKAKHPFTSDADNRLEGG 400
Qy 419 FYGPKGRELAKFLTDNNKLGVFQAKRD--KVEKTEALDAYALGTEN--NTNKAFTFT 474
Db 401 FYGPNAEELAKFLTDNNKLGVFQAKQESAKEATEALDAYALGTENKSGTTNPA--FT 458
Qy 475 PFTKQLDNFGNAKVLGSTVINLVSATDKNKFTKTKKPSATNKAAGETLMVND 534
Db 459 ANSKELDNFGNINKVLGSIVIDLTQ---GNDPVKTIKKEKATTINQAGEPLTVNDK 514
Qy 535 VIVTYGKQNFYKFGELSGVDSHSVFLQGBERTATTG--EKAVPTTGKAKYLGNNVGYIT 592
Db 515 VRVQCCSNLEHLKFGSLGSDNSVFLQGBERTATKGDKAMPVAGNAKYRGTWAGYVA 574
Qy 593 GAGTGKSFNEAQDIAD-----FDIDPERKSVKGLTQGRTD--PVNIGETAGNWT 644
Db 575 CSGNTSKAYEAQQFADNANRAEFVDVFANKSLTGKLIENPSSDGKSAFDITATIDNGFS 634
Qy 645 KASPTTKADAGYKIDS--SSTGKSIVIENAEVTCGGYGPANEMGGSFTHTD----- 696
Db 635 GRANTPDITGGLKIDSKNSSEGR--VIVKDAIVGGFYGPQANELGGSFYTKNSDAGNQD 693

Qy 697 -DSKASVVFGTKRQOEVK 713
Db 694 KDSSASVVFGARKQOEVK 711

RESULT 18
US-09-540-236-2388
Sequence 2388, Application US/09540236
Patent No. 6673910
GENERAL INFORMATION:
APPLICANT: Gary L. Breton et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO MORAXELLA CATA
TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2005-001
CURRENT APPLICATION NUMBER: US/09/540.236
NUMBER OF SEQ ID NOS: 2000-04-04
SEQ ID NO 2388
LENGTH: 416
TYPE: PRT
ORGANISM: M.catarrhalis
US-09-540-236-2388

Query Match 43.0%; Score 1599; DB 4; Length 416;
Best Local Similarity 77.8%; Pred. No. 2.8e-101;
Matches 322; Conservative 32; Mismatches 42; Indels 18; Gaps 8;

Qy 311 RQTQ-----WRSLSVSTDEYATLLTDKNKPSDYNAGYHSSSEFDVNFADKKIKGLISNQ 365
Db 9 RQTPMGVWVWFLMSMQHSC--OPKIPSPSNYNGAYHSSSEFDVNFANKVTKGLISNQ 65
Qy 366 LSGTAVTAKERYKIEADHGNRFRGSATASDKAEDSKTOHPFTSDATNKGEGFYGPKE 425
Db 66 LSGKTVTAKERYKIEADHGNRFRGSATASEKTDSESKHPFTSDAKDKLGGFYGPKE 125
Qy 426 ELACKETDNNKLGVFQAKRD--KVEKTEALDAYALGTENNTKATFTFTTKQLDNF 484
Db 126 ELAKFTDNNKLGVFQAKQEGEAKTEALDAYALGTF--NTNDATFTFTTKQLDNF 184
Qy 485 GNAKKVLGSTVINLVSATDKNKFTKTKKPSATNKAAGETLMVNDVIVTKYGNF 544
Db 185 GNAKKVLGSTVIDLVPTDAKD--VNEFTKNKPESATNKAAGETLMVNDKVSVKTYGNF 242
Qy 545 EYLKFGELSGVDSHSVFLQGBERTATTGKAVPTTGKAKYLGNNVGYI----TGAGTGKSP 600
Db 243 EYLKFGELSGVTSNSVFLQGBERTVTTGKAVPTTGAKYLGNNVGYIAGKDTGAGSSKGF 302
Qy 601 NEAQDIADFDIDPERKSVKGLTQGRTDPVNIGETAGNWTGKASTTKADAGGYKID 660
Db 303 TDAKDVADEFDIDPEKTVNGKLITQGRQDPVFNITQIAGNWTGTASTAKANAGGYNID 362
Qy 661 -SSSTGKSIVIENAEVTCGGYGPANEMGGSFTHTDSDSKASVVFGTKRQOEVK 713
Db 363 SSSSTNSIVIKDAEVTGGYGPANEMGGSFTHTNADDSKVSUVFGTKK--QEVK 415

RESULT 19
US-08-613-009A-20
Sequence 20, Application US/08613009A
Patent No. 6090576
GENERAL INFORMATION:
APPLICANT: Myers, Lisa E
APPLICANT: Schryvers, Anthony B
APPLICANT: Harkness, Robin E
APPLICANT: Loosmore, Sheena M.
APPLICANT: Du, Run-Pan
APPLICANT: Yang, Yan-Ping
APPLICANT: Klein, Michel H
TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: SIm & McBurney
STREET: 6th Floor, 330 University Avenue

QY 380 EADHGNRFRGSATASDKAEDSKTOHPPTSDATNKLGGFYGPKGEEELAGKFLTDNNKLF 439
Db 282 QATLHGNRFRGKALAAADKGA-TNGSHPFISD-SOSLEGFGYGPKEELAGKFLSNDNNKVA 339
QY 440 GVFGAK-RDKVE-----KTEALDAYALGTFNNNTKATTTFTPTTKQLDNFGNAKLV 491
Db 340 AVFGAKQKDKKGENAAGPATETVIDAYRI-----TGEEFKKEQIDSGDGVKKLL 389
QY 492 LGSTVINLVSATDKVETKFTKDKPTSAATNKAAGTLMVNDVIVKTYGNFYLKFG 551
Db 390 VDGVELSLPSEGNKAAPQHEIQ-----NGVKATVCCS-----NLDYMSFGK 432
QY 552 LSVGDHSVFLQERTATTGKAVPTTKGKAYLGNWVGYITGAGTKS-----FNEAQD 605
Db 433 LSKENKDDMFLOGVTRTPVS-DVAARTENAKRTGWYGIYAN-GTWSGSEASNOFTGEGN 490
QY 606 IADFDIDPERKSVKGLTTQGRTPVFNIGKAGNWTGKASTTKADAGKYKIDSSSTG 665
Db 491 RAEFDVDFSTKISGTLTAKORTSPAPTITAMIKDNGFSGVAKTGE---NGFALDPQNTG 547
QY 666 KSVIE-NAEVTGGFYGNANEMGGSFTH-----DTDDSKASVVFGTKRQOEK 713
Db 548 NSHYTHIEATVSGFGYGNKNAIEMGGSFSPGNAPEGKQEKASVVFGAKRQOLVQ 601

RESULT 21

US-09-059-584-26
; Sequence 26, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 601 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-09-059-584-26

Query Match 22.8%; Score 845.5; DB 4; Length 601;
Best Local Similarity 35.0%; Pred. No. 1.2e-49;
Matches 229; Conservative 100; Mismatches 202; Indels 123; Gaps 25;
QY 89 EPKYQDVPTDKNEKEOVSSIQEPAMGVAMELKLNHPLNPNKNKEAEKRI-ALDOKDLV 147
Db 42 KPKYEDSKSPESQODVSENSGAAYGFAVKLPRNAH-FNP-KYKEKHKPLGSDHWKKLQ 99
QY 148 AVEGDLTNIPDKNLIEYLLKSSSEW-SKFEAQKGGIENNTLTHKOLSSSQEAKVKEA 206
Db 100 RGE---FNSFSERDELEKKGSSSELIESKWDGQSRVGVYTNFT----- 140
QY 207 LDNALTOFAOEKYKELIENAHDKSDARNRDLVYVSGFNYLSYTTATDHDKKN--YRG 264
Db 141 -----YVRSYVYLN---KNNIDIKNNVILFG 164
QY 265 YYGALYYKGSSETAKELPQTSKAYKYWDFTDNLNKTDLPGIARQTWRSLVSTDEY 324
Db 165 PDGVLYYKGBPKSEKLPSEKITYKGTWYVDAMEKORFEGLSAAGDGSALALEE- 223
QY 325 ATLLTDKNNKPSDYNGAYGHSSBFDVNFADKIKGKLI-SNQLSGTAVTAKE----RYKI 379
Db 224 -GVLRNQAESSGHTD-FGMTSEFVDFDKTIKGLYRNNRITQNNSENKQIKTYTI 281
QY 380 EADHGNRFRGSATASDKAEDSKTOHPPTSDATNKLGGFYGPKGEEELAGKFLTDNNKLF 439
Db 282 QATLHGNRFRGKALAAADKGA-TNGSHPFISD-SDSLEGGFYGPKGEEELAGKFLSNDNNKVA 339
QY 440 GVFGAK-RDKVE-----KTEALDAYALGTFNNNTKATTTFTPTTKQLDNFGNAKLV 491
Db 340 AVFGAKQKDKKGENAAGPATETVIDAYRI-----TGEEFKKEQIDSGDGVKKLL 389
QY 492 LGSTVINLVSATDKVETKFTKDKPTSAATNKAAGTLMVNDVIVKTYGNFYLKFG 551
Db 390 VDGVELSLPSEGNKAAPQHEIQ-----NGVKATVCCS-----NLDYMSFGK 432
QY 552 LSVGDHSVFLQERTATTGKAVPTTKGKAYLGNWVGYITGAGTKS-----FNEAQD 605
Db 433 LSKENKDDMFLOGVTRTPVS-DVAARTENAKRTGWYGIYAN-GTWSGSEASNOFTGEGN 490
QY 606 IADFDIDPERKSVKGLTTQGRTPVFNIGKAGNWTGKASTTKADAGKYKIDSSSTG 665
Db 491 RAEFDVDFSTKISGTLTAKORTSPAPTITAMIKDNGFSGVAKTGE---NGFALDPQNTG 547
QY 666 KSVIE-NAEVTGGFYGNANEMGGSFTH-----DTDDSKASVVFGTKRQOEK 713
Db 548 NSHYTHIEATVSGFGYGNKNAIEMGGSFSPGNAPEGKQEKASVVFGAKRQOLVQ 601

RESULT 22

US-08-448-194-2
; Sequence 2, Application US/08448194
; Patent No. 6028049
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THIESEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS:
; ADDRESSES: Burns, Doane, Swecker & Mathis
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk


```

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/448,194
FILING DATE: 23-MAY-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/361,469
FILING DATE: 22-DEC-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/078,053
FILING DATE: 18-JUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 92 07493
FILING DATE: 19-JUN-1992
ATTORNEY/AGENT INFORMATION:
NAME: McGowan, Malcolm M.
REGISTRATION NUMBER: 39,300
REFERENCE/DOCKET NUMBER: 016100-004
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 599 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-448-194-2

Query Match      22.7%; Score 841.5; DB 3; Length 599;
Best Local Similarity 34.9%; Pred. No. 2.3e-49;
Matches 227; Conservative 104; Mismatches 201; Indels 119; Gaps 25;

QY      89 EPKYQDVPTDKNEKEQVSSIQEPANGYAMELKLNAPLNPNKNKEAEKRI-ALDQKDLV 147
Db      42 KPKEYDEKSPQSDQVSENSGAAYGFAVKLPFRNAH-FNP-KYKEKHKLGLSMDWKLLQ 99

QY      148 AVEGDLTNIPDKNLIELYKKSSEVV-SKPEAQKGGIENNRHLTHKLSSEQKEAKYKEA 206
Db      100 RGE---PNSFSEKLEKKRGSSELIIESKWDGQSRVVGYNFT-----140

QY      207 LDNALTFQAQEKYKELIENAHDKSDARNRDLVYKSGFNYSGLGYTATDHDKKTN--YRG 264
Db      141 -----YVRSYGYYLN---KNNDIKNNIVLFG 164

QY      265 YGALYYKSGSEAKELPQTSKAKYKYWDPMTDATLDNKKYTLDPGIARQOTWRSVLTDEY 324
Db      165 PDGILYYKSGSEKELPSEKITYKGTWYVTDAMEKQRFEGLSGAAGDSKGSALSLEE- 223

QY      325 ATLLTDKNNKPSDYGAYGHSSEFDVNFADKKIKGKLI-SNQLSGTAVTAKE---RYKI 379
Db      224 -GVLRNQEAASSGHTD-FQMTSEFEVDFSDKIITKTLTYRNNRITQNNSENKQIKTRITI 281

QY      380 EADIHGNRFRGSATSDKAEDSKTOHPFTSDATNKLGGFYGPKEELAGKFLTDDNKLFL 439
Db      282 QATLHGNRFKGLAALDKGA-TNGSHPTISD-SDSLEGGFYGPKEELAGKFLSNDNKVA 339

QY      440 GVFGAK-RDKVE-----KTEAILDAVALGTFFNNNNKATTTFTPTKKQLDNFNKAKLV 491
Db      340 AVFGAKQKDKDGENAAGPATETVIDAVRI-----TGEEFFKKEQIDSGFDVKLL 389

QY      492 LGSTVINLSTATKNEFTKTKDKPTSATNKAGETLWVNDVIVTKYGNVEYLKFE 551
Db      390 VDGVELSLPLSPSGNKAAPQHEIEQ-----NGVKATVCCS-----NLDYMSFGK 432

QY      552 LSVGDSHSLVFLQERTATTGEXAVPTTGKAKYKLGNNWGYITG--AGTKSPN-EAQDIAD 608
Db      433 LSKENKDDNFLOQVTRTPVS-DVAATEANAKYRGTYGYIANGTISWGEASNQGCGNRAE 491

QY      609 FIDFERKSVKGLTITQGTGRTDPVFNKIGELIAGNGWTGKASTTKADAGCYKIDSSSTCKSI 668
Db      42 KPKEYDEKSPQSDQVSENSGAAYGFAVKLPFRNAH-FNP-KYKEKHKLGLSMDWKLLQ 99

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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/448,194
FILING DATE: 23-MAY-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/361,469
FILING DATE: 22-DEC-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/078,053
FILING DATE: 18-JUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 92 07493
FILING DATE: 19-JUN-1992
ATTORNEY/AGENT INFORMATION:
NAME: McGowan, Malcolm M.
REGISTRATION NUMBER: 39,300
REFERENCE/DOCKET NUMBER: 016100-005
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 599 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-448-194-2

Query Match      22.7%; Score 841.5; DB 3; Length 599;
Best Local Similarity 34.9%; Pred. No. 2.3e-49;
Matches 227; Conservative 104; Mismatches 201; Indels 119; Gaps 25;

QY      89 EPKYQDVPTDKNEKEQVSSIQEPANGYAMELKLNAPLNPNKNKEAEKRI-ALDQKDLV 147
DB      42 KPKEYDEKSPQSDQVSENSGAAYGFAVKLPFRNAH-FNP-KYKEKHKLGLSMDWKLLQ 99

QY      148 AVEGDLTNIPDKNLIELYKKSSEVV-SKPEAQKGGIENNRHLTHKLSSEQKEAKYKEA 206
DB      100 RGE---PNSFSEKLEKKRGSSELIIESKWDGQSRVVGYNFT-----140

QY      207 LDNALTFQAQEKYKELIENAHDKSDARNRDLVYKSGFNLYSGYTATDHDKKTN--YRG 264
DB      141 -----YVRSYGVYLN---KNNDIKNNIVLFG 164

QY      265 YGALYYKSGSEAKELPQTSKAKYKYWDPMTDATLDNKKYTLDPGIARQOTWRSVLTDEY 324
DB      165 PDGILYYKSGSEKELPSEKITYKGTWYVTDAMEKQRFEGLSGAAGDSKGSALSLEE- 223

QY      325 ATLLTDKNNKPSDYGAVGHSSEFDVNFADKKIKGKLI-SNQLSGTAVTAKE---RYKI 379
DB      224 -GVLRNQEAASSGHTD-FQMTSEFEVDFSDKTIKGTLYRNNRITQNNSENKQIKTHRTYI 281

QY      380 EADIHGNRFRGSATSDKAEDSKTQHPFTSDATNKLGGFYGPKEELAGKFLTDDNKLFL 439
DB      282 QATLHGNRFKGLAALDKGA-TNGSHPTISD-SDSLEGGFYGPKEELAGKFLSNDNKVA 339

QY      440 GVFGAK-RDKVE-----KTEAILDAVALGTFFNNNNKATTTFTPTTKQLDNFNKAKLV 491
DB      340 AVFGAKQKDKDGENAAGPATETVIDAVRI-----TGEEFFKKEQIDSGFDVKLL 389

QY      492 LGSTVINLSTATKNEFTKTKDKPTSATNKAGETLWVNDVIVTKYGNVEYLKFE 551
DB      390 VDGVELSLPLSPSGNKAAPQHEIEQ-----NGVKATVCCS-----NLDYMSFGK 432

QY      552 LSVGDSHSLVFLQERTATTGEXAVPTTGKAKYKLGNNWGYITG--AGTKSPN-EAQDIAD 608
DB      433 LSKENKDDNFLOQVTRTPVS-DVAATEANAKYRGTYGYIANGTWSGEASNGEGGNRAE 491

QY      609 FIDFERKSVKGLTITQGTGRTDPVFNKIGELAGNWTGKASTTKADAGCYKIDSSSTCKSI 668
DB      42 KPKEYDEKSPQSDQVSENSGAAYGFAVKLPFRNAH-FNP-KYKEKHKLGLSMDWKLLQ 99

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Qy 148 AVEGDLTNPDKNLIYLLKSSSEVV-SKFEAQKGGIENNTLTHKDLSSQKAEKAKVEA 206
 Db 100 RGE-----PNSFSEDELEKKGSSSELIESKWEDGQSRVGYTNFT-----140
 Qy 207 LDNALTPAQAEKYKELIENAHDKKSDARNRDLLEYVYKSGFNYSYGTATDHDKKN--YRG 264
 Db 141 -----YVRSQVYVYN-----KNNIDIKNNVILFG 164
 Qy 265 YGALYVYKSGTAKELPQTSYKGYWDFMTDNLNKYTDLPGLARTQWRSLVSTDEY 324
 Db 165 PDGYLYYKSGKPELSEKITYKTGWDVYTDAMEKQRFGLGSAAGDKGALSALEB- 223
 Qy 325 ATLTDKNNKPSDYNGAYGHSSEFVNFPADKKIKGLI-SNOLSGTAVTAK-----RYKI 379
 Db 224 -GVLRNQAESSGHTD-FGMTSEFEVDFSDKTIKGLTYRNNRITQNNSENKQIKTRYI 281
 Qy 380 EADIHGNNRFRGSATASDAEDSKTQHPPTSDATNKGEGFYGPKEELAGKFLTDNKL 439
 Db 282 QATLHGNRFGKALAAADKGA-TNGSHPFISD-SDSLEGGFYGPKEELAGKFLSNDKVA 339
 Qy 440 GVFGAK-RDKVEKTEA-----ILDALYALGTFFNNNTKATFTPTTKQLDNFGNAKVL 491
 Db 340 AVFGAKQKDKDGENAAGPATETVIDAYRI-----TGEEFKKEQIDSGDVKKLL 389
 Qy 492 LGSTVINLVSTDATKNEFTKTKDKPTSATNKGAGETILMVNDEVIVKTYGKNFEVYLF 551
 Db 390 VDGVELSLPSEGNAAFQHEIEQ-----NGVKATVCCS-----NLDYMSFGL 432
 Qy 552 LSVGDSHVSFLQERTATTGKAVPTTGKAKYLGWVGYITG--AGTGKSFN-EAQDIAD 608
 Db 433 LSKENKDDMFQGVTRTPVS-DVAARTEANAKYRGTYGYIANGTSWSGEASNGEGNRAE 491
 Qy 609 FDIIFERKSVGKLTQORTDPVFNKGEIAGNWTGKASTTKADAGYKIDSSSTGSKI 668
 Db 492 FDVDFSTKISGTLTAKORTSPAFTITAMIKONGFSGVAKTGE---NGFALDPQNTGNSH 548
 Qy 669 VIE-NAEVTGGFYGNANEMGGSFTH-----DTDDSKASVVGCTKROQEVK 713
 Db 549 YTHIATVSGGFYGNALTEMGGSFSPGNAPGKQEKASVVGAKRQQLVQ 599

RESULT 24

US-08-487-890A-97
 ; Sequence 97, Application US/08487890A
 ; Patent No. 5708149
 ; GENERAL INFORMATION:
 ; APPLICANT: Loosmore, Sheena
 ; APPLICANT: Harkness, Robin
 ; APPLICANT: Schryvers, Anthony
 ; APPLICANT: Chong, Fele
 ; APPLICANT: Gray-Owen, Scott
 ; APPLICANT: Yang, Yan-ping
 ; APPLICANT: Mordin, Andrew
 ; APPLICANT: Klein, Michel
 ; TITLE OF INVENTION: Transferrin Receptor Genes
 ; NUMBER OF SEQUENCES: 147
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESS: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue
 ; CITY: Toronto
 ; STATE: Ontario
 ; COUNTRY: Canada
 ; ZIP: M5G 1R7
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent In Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/487,890A
 ; FILING DATE: 07-JUN-1993
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/175,116
 FILING DATE: 29-DEC-1993
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/148,968
 FILING DATE: 08-NOV-1993
 ATTORNEY/AGENT INFORMATION:
 NAME: Stewart, Michael I
 REGISTRATION NUMBER: 24,973
 REFERENCE/DOCKET NUMBER: 1038-466 MIS:jb
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (416) 595-1155
 TELEFAX: (416) 595-1163
 INFORMATION FOR SEQ ID NO: 97:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 598 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 US-08-487-890A-97

Query Match 22.4%; Score 834; DB 1; Length 598;
 Best Local Similarity 34.8%; Pred. No. 7.6e-49;
 Matches 226; Conservative 104; Mismatches 202; Indels 118; Gaps 25;
 Qy 89 EPKYQDVPDKNKEQEYSSIOEPAGVAMELKLNAHPLNPNKKEAEKRI-ALDQKDLV 147
 Db 42 KPKYEDSKSQESQODVSENSGAAYGFAVCLPRRNAH-FNP-KYKREKHPLGSDMDKQLQ 99
 Qy 148 AVEGDLTNPDKNLIYLLKSSSEVV-SKFEAQKGGIENNTLTHKDLSSQKAEKAKVEA 206
 Db 100 RGE-----PNSFSEDELEKKGSSSELIESKWEDGQSRVGYTNFT-----140
 Qy 207 LDNALTPAQAEKYKELIENAHDKKSDARNRDLLEYVYKSGFNYSYGTATDHDKKN--YRG 264
 Db 141 -----YVRSQVYVYN-----KNNIDIKNNVILFG 164
 Qy 265 YGALYVYKSGTAKELPQTSYKGYWDFMTDNLNKYTDLPGLARTQWRSLVSTDEY 324
 Db 165 PDGYLYYKSGKPELSEKITYKTGWDVYTDAMEKQRFGLGSAAGDKGALSALEB- 223
 Qy 325 ATLTDKNNKPSDYNGAYGHSSEFVNFPADKKIKGLI-SNOLSGTAVTAK-----RYKI 379
 Db 224 -GVLRNQAESSGHTD-FGMTSEFEVDFSDKTIKGLTYRNNRITQNNSENKQIKTRYI 281
 Qy 380 EADIHGNNRFRGSATASDAEDSKTQHPPTSDATNKGEGFYGPKEELAGKFLTDNKL 439
 Db 282 QATLHGNRFGKALAAADKGA-TNGSHPFISD-SDSLEGGFYGPKEELAGKFLSNDKVA 339
 Qy 440 GVFGAK-RDKVEKTEA-----ILDALYALGTFFNNNTKATFTPTTKQLDNFGNAKVL 492
 Db 340 AVFGAKQKDKDGENAAGPATETVIDAYRI-----TGEEFKKEQIDSGDVKKLL 389
 Qy 492 LGSTVINLVSTDATKNEFTKTKDKPTSATNKGAGETILMVNDEVIVKTYGKNFEVYLF 552
 Db 390 VDGVELSLPSEGNAAFQHEIEQ-----NGVKATVCCS-----NLDYMSFGL 432
 Qy 552 LSVGDSHVSFLQERTATTGKAVPTTGKAKYLGWVGYITG--AGTGKSFN-EAQDIAD 609
 Db 433 LSKENKDDMFQGVTRTPVS-DVAARTEANAKYRGTYGYIANGTSWSGEASNGEGNRAE 491
 Qy 610 FDIIFERKSVGKLTQORTDPVFNKGEIAGNWTGKASTTKADAGYKIDSSSTGSKI 669
 Db 492 FDVDFSTKISGTLTAKORTSPAFTITAMIKONGFSGVAKTGE---NGFALDPQNTGNSH 548
 Qy 670 IE-NAEVTGGFYGNANEMGGSFTH-----DTDDSKASVVGCTKROQEVK 713
 Db 549 YTHIATVSGGFYGNALTEMGGSFSPGNAPGKQEKASVVGAKRQQLVQ 598

RESULT 25

US-08-478-435-97
 ; Sequence 97, Application US/08478435
 ; Patent No. 5922323

RESULT 27
US-08-478-373-97
; Sequence 97, Application US/08478373
; Patent No. 5922841
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:

265	QY	ITGALLHGRSEIAKELPQISAKIAGTWDFWFDALDILDMKNKILIDEPGIAKQIKWRSIVSDIRI	320
165	Db	PDGYLYKKGEPKELPSEKITTYKGTWYDYVDAMEKQRFGLGSAAGDGSGALSALBEE-	223
325	QY	ATLLTDKNKPKSPYNGAYGHSSRFDFNFADKKIKGLI-SNOISGTVATKE-----RVKI	379
224	Db	-GVLRNQEAASSGHTD-FGMTSEFVDVFSOKITKGLTYRNNRITNNSENKQIKITRTYTI	281
380	QY	EADIHGNNRFSGSATASDKARDSKIQTPFTSDATNKLGGFYGPKGEELAGKFLTDNDKLF	439
282	Db	QATLHGNRFKGLAADKGA-TWGSHPPIFSD-SDSLEGGFYGPKGEELAGKFLSDNDKVA	339
440	QY	GVEGAK-RDKVEKTEA-----ILDYALGCTFNNTNKATITFTPTPKQLDNFGNAKLV	492
340	Db	AVFGAKQDKKDGENAAGPATEVIDAYRI-----TGEPKPEQIDISFGDVKKLLV	389
493	QY	GSTVINLVSTDAYNBEPTTKFTKDKDTSATNKAGETLMVNDENVITKYTKNFEYLKKGEL	552
390	Db	DGVELSLLPSEGKAAAFQHEIQ-----NGVKATVCCS-----NLDYMSFGKL	432
553	QY	SVGDSHSVFLOGERTATTGKAPVTTCKAKVLGNWVCYITG--AGTGKSFN-EAQDITADF	609
433	Db	SKENKODMFLQGVRTTPVS-DVAARTEANAKYRGTWGYIANGTISWSGEASQEGGNRAEF	491


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; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-511
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-483-577A-97

Query Match          22.4%; Score 834; DB 3; Length 598;
Best Local Similarity 34.8%; Pred. No. 7.6e-49;
Matches 226; Conservative 104; Mismatches 202; Indels 118; Gaps 25;

Qy      89 EPKYQDVPTDKNEKEQYSSIOEPAMGYAMELKLRLNAHPLNPNKNEAEKR-I--ALDQKDVL 147
       :|::||::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db      42 KPKYEDEKSQPESQQDVSENSGAAYFAVKLPRENAH-FNP-KYKEXHKPLGSDMKQLQ 99

Qy     148 AVEGDLTNIIPDKNLIIEYLKXSEVV-SKFPQAQGGIENNTRLTHKOLSSQKEAKVEA 206
       :|::||::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db     100 RGE---PNSFSERDELEKRGSSSELBSKWEDGOSRVVGYYTNFT----- 140

Qy     207 LDNALTFQAQEKKELIENAHDKSDARNRDLEVYKGFNVLSGVYATTDHDKKTN--VRG 264
       :|::||::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db     141 -----YRSGYVLYN----KNIDIKNNIVLFG 164

Qy     265 YYGALYYKGSETAKELPOTSACYKGYWDFMTDATLDNKYTDLPGIARQTOWRSILVSTDEY 324
       :|::||::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db     165 PDGYLYYKGEPSKELPSEKITTYKGTWDYVTDA MEKQRFEGLGSAAGDGSKGALSALEE- 223

Qy     325 ATLLTDKRNKPSDYNGAYGHSHSEFDVPADKKIKGLI-SNQLSGTAVTAKE-----RYKI 379
       :|::||::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db     224 -GVLRNAQEAASSGHTD-FGMTSEFEVDPSDTIKGTLYRNRIITQNNSENKQIKTRYTI 281

Qy     380 EADITHGNRFRGSATASDKAESDKTOHPDTS DATWKLEGGFYGPKEELAGKFLTDNDKLF 439
       :|::||::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db     282 QATUHGHRFKGALAADKA-TNGSHPTISD-SDSLEGFFYPGKEELAGKFLSNDKNVA 339

Qy     440 GVFGAK-RDKVEKTEA-----ILDVALGTFNNNTKATTPTTKQLDNFGNAKLV 492
       :|::||::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db     340 AVFGAKQKDKDGENAAGPATETVIDAYRI-----TGEEPKSEQIDSFGDVKKLLV 389

Qy     493 GSTVINLVSTDATKNEFTKTKDPKTPSATNKAGETLMVNDEVIVKYYGNPFYLYKFGEL 552
       :|::||::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db     390 DGVLSLLSPSEGNAKAAFOHEIQ-----NGVATVCCS-----NLDYMSFGKL 432

Qy     553 SVGPSHSVFLOGETATTGEEKAVPTTGKAKYLGNNVGYITG--AGTGKSFN-EAQDIADF 609
       :|::||::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db     433 SKENDDMFLOGVTRTPVS-DVAATEANAKYRGTWGYIANGTWSWGSEASQEGGNRAEF 491

Qy     610 DIDPERKSVKGLTTQGRTPDPVFNIGIEIAGNGWTGKASTTKADAGGYKIDSSSTGKSIV 669
       :|::||::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db     492 DVDPS TKKISGTLTAKORTSPAFTIAMIKDNFGPSGVAKTGE---NGFALDPQNTGNSHY 548

Qy     670 IE-NAEVTGFGPYGNANEMGSGSPH-----DTDDSKASVFGTKRQEVK 713

Db     549 THIEATVSGFYGKNAITEMGSGSFPPGNAPGKOEKASVFGAKRQQLVQ 598

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RESULT 30

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US-08-997-438-97
; Sequence 97, Application US/08997438
; Patent No. 6262016
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 160
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/897,438
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/483,577
; FILING DATE: 07-JUN-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-720
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-997-438-97

Query Match 22.4%; Score 834; DB 3; L
Best Local Similarity 34.8%; Pred. No. 7.6e-49;
Matches 226; Conservative 104; Mismatches 202;

Qy 89 EPKYQDVPTDKKEKEOVSSIQBPAGMYAMELKLRNAHPLN
Db 42 KPKYEDKSPQSDQSDVSENSSAAVGFVKLPRLNAH-FN
Qy 148 AVEGDLTNIPFDKNIETLYLKKSGSEVV-SKFEAQKGGIENN
Db 100 RGE---PNSFSEDELEKKRGSSSELIESKWEDQGRVGVY
Qy 207 LDNALTFQAEKYKELIENAHDKKSDARNRDLEYVYKSGFN
Db 141 -----YVRSGYV

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THE UNIVERSITY OF TORONTO

QY 265 YGALYYKGSATKELPOTSAYKYGYWDFMTDADLNKYTDLPGIARTQWRSLVSTDEY 324
Db 165 PDGVLYYKGSPELSEKITYKGTWYVTDAMEKQRFEGLSAAGDKSGALSALBEE- 223
QY 325 ATLLTDKNNKPSDYNAGYCHSEPDVNFADKKIKGLI-SNOLSGTAVTAKE----RYKI 379
Db 224 -GVLNRQAEASGGHTD-FGMTSEFEVDFSDKTIKGTLYRNNRITQNNSENKQIKTRYTI 281
QY 380 EADHGNRFRGSATASDAEDSKTQHPFTSDATNKGFGYGPKEELAGFLTDNKLJF 439
Db 282 QATLHGNRFKGAALADKGA-TNGSHPFISD-SDSLEGGFYGPKEELAGFLSNDNKVA 339
QY 440 GVFGAK-RDKVEKTEA-----ILDAYALGTFNNTNKATFTPTFKQLDNFGNAKLVL 492
Db 340 AVFGAKQKDDGENAAGPATEVIDAYRI-----TGEEFKKEQIDSGDVKKLLV 389
QY 493 GSTVINLVSTDAKNEFTKTKPTSDATNKAAGETLMVNDEVIVKTYGKNFEYKKGEL 552
Db 390 DGVELSLLPSEGNAKAAFOHEIEQ-----NGVKATVCCS-----NLDYMSFGKL 432
QY 553 SVGDSHVSFLOGERTATTGEKAVPTTGKAKYLGNNVGYITG--AGTGKSFN-EAQDIADF 609
Db 433 SKENKDDMFLOQVTRPVS-DVAARTEANAKYRGTYWGYIANGTWSGSEASNOEGNRAEF 491
QY 610 DIDFERKSVKGLTTCGRTPDPVFNKIGEAGNWTGKASTTKADAGGYKIDSSSTGKSIV 669
Db 492 DVDFSTKISGTLTAKORTSPAFTITAMIKDNGFSGVAKTGE--NGFALDPQNTGNSHY 548
QY 670 IE-NAEVTGGGYGPNANEMGGSFTH-----DTDDSKASVWFGTKRQOEVBK 713
Db 549 THIEATVSGGYGKNAIEMGGSFSPGNAPEGKQEKASVWFGAKRQOLVQ 598

RESULT 31

US-08-637-654-97
; Sequence 97, Application US/08637654
; Patent No. 6358727
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Harkness, Robin E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew D
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: HAEMOPHILUS TRANSFERRIN RECEPTOR GENES
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/637,654
; FILING DATE: 05-AUG-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/CA94/00616
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-595
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155

TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRAND: single
; TOPOLOGY: linear
US-08-637-654-97
Query Match 22.4%; Score 834; DB 3; Length 598;
Best Local Similarity 34.8%; Pred. No. 7.6e-49;
Matches 226; Conservative 104; Mismatches 202; Indels 118; Gaps 25;
QY 89 EPKYQDVPTDKNEKEQVSSIQEPANGYAMELKLRNAHPNPNKNKAEKRI-ALDQKDLV 147
Db 42 KPKYEDEKSPESQODVSENSGAAYGFAVKLPRENAH-FNP-KYKEXKHPKLGSMWKKLQ 99
QY 148 AVEGDLNIPDKNLI EYLKKSSEV-SKFEAQKGGIENNTRLTHKOLSSSQEAKVKEA 206
Db 100 RGE---PNSFSEDELEKRGSSSELESKEWEDQGSRVVGTNFT----- 140
QY 207 LDNALTQFAOEKYEKELIENAHDKKSDARNRDLVYVKSFNVLGYTATDHDKKTN--YRG 264
Db 141 -----YVRSYGVLYN---KNIDIKNNIVLFG 164
QY 265 YGALYYKGSATKELPOTSAYKYGYWDFMTDADLNKYTDLPGIARTQWRSLVSTDEY 324
Db 165 PDGVLYYKGSPELSEKITYKGTWYVTDAMEKQRFEGLSAAGDKSGALSALBEE- 223
QY 325 ATLLTDKNNKPSDYNAGYCHSEPDVNFADKKIKGLI-SNOLSGTAVTAKE----RYKI 379
Db 224 -GVLNRQAEASGGHTD-FGMTSEFEVDFSDKTIKGTLYRNNRITQNNSENKQIKTRYTI 281
QY 380 EADHGNRFRGSATASDAEDSKTQHPFTSDATNKGFGYGPKEELAGFLTDNKLJF 439
Db 282 QATLHGNRFKGAALADKGA-TNGSHPFISD-SDSLEGGFYGPKEELAGFLSNDNKVA 339
QY 440 GVFGAK-RDKVEKTEA-----ILDAYALGTFNNTNKATFTPTFKQLDNFGNAKLVL 492
Db 340 AVFGAKQKDDGENAAGPATEVIDAYRI-----TGEEFKKEQIDSGDVKKLLV 389
QY 493 GSTVINLVSTDAKNEFTKTKPTSDATNKAAGETLMVNDEVIVKTYGKNFEYKKGEL 552
Db 390 DGVELSLLPSEGNAKAAFOHEIEQ-----NGVKATVCCS-----NLDYMSFGKL 432
QY 553 SVGDSHVSFLOGERTATTGEKAVPTTGKAKYLGNNVGYITG--AGTGKSFN-EAQDIADF 609
Db 433 SKENKDDMFLOQVTRPVS-DVAARTEANAKYRGTYWGYIANGTWSGSEASNOEGNRAEF 491
QY 610 DIDFERKSVKGLTTCGRTPDPVFNKIGEAGNWTGKASTTKADAGGYKIDSSSTGKSIV 669
Db 492 DVDFSTKISGTLTAKORTSPAFTITAMIKDNGFSGVAKTGE--NGFALDPQNTGNSHY 548
QY 670 IE-NAEVTGGGYGPNANEMGGSFTH-----DTDDSKASVWFGTKRQOEVBK 713
Db 549 THIEATVSGGYGKNAIEMGGSFSPGNAPEGKQEKASVWFGAKRQOLVQ 598

RESULT 32

US-08-649-518-97
; Sequence 97, Application US/08649518
; Patent No. 6361779
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 160


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Query Match      22.3%; Score 828; DB 3; Length 578;
Best Local Similarity 35.0%; Pred. No. 1.9e-48;
Matches 228; Conservative 100; Mismatches 202; Indels 122; Gaps 26;

Qy 89 EPKQDVPTDNEKEQVSIQEPAMGYAMELKLNNAHPLNPNKKEAEKRI-ALDQKDLV 147
Db 22 KPKEDEKSPQESQDDVSENGAAYGFAVKLPRNAH-FNP-KYKEKHKPLGSDWKKLQ 79

Qy 148 AVEGDLTNIIPDKNLIEYLKSSSEV-SKPEAQGGIENNTRLTHKOLSSSEKAEKVEA 206
Db 80 RGE---PNSFSERDELEKKGSSSELIESKWDGQSRVVGYNFT-----120

Qy 207 LDNALTOFAOEKYKELIENAHDKKSDARNRDLEYVKSGFNYLSGYTATDHDKKTN--YRG 264
Db 121 -----YVRSQVYVLN---KNNIDIKNIVLFG 144

Qy 265 YYGALYKYGSTAKELPOTSACYKYGYWDFMTDNLNKYDLPGLIARQOTQWRSVLSTDEY 324
Db 145 PDGYYLYKKGPEPSKELPSEKITTYKGTWYVTDAMEKQRFEG--GSAAGGDKSGALSLEE 202

Qy 325 ATLLTDKNN-KPSDYNCAIGHSSSEFVNFADKKIKGLI-SNQLSGTAVTAKE-----RYK 378
Db 203 GVL---RNOAEASSGHTDFGMTSEFVDFSDTKTIGTLYRNRRITQNNSENKQIKTTRYT 259

Qy 379 IEADHGNRRFRGSATASDKAEDSKTQHPFTSDATNKLKLEGGFYGPKGEBELAGKFLTDNNKL 438
Db 260 IQATLHGNRRFKGALAADKGA-TNGSHPPFISD-SDSLEGGFYGPKGEBELAGKFLSNDKV 317

Qy 439 FGVEGAK-RDKVE-----KTEAILDAYALGTFTNNTNKATFTTPTFKQLDNFNAKKL 490
Db 318 AAVFGAKQKDKKDGNAAGPATETVIDAYRI-----TGEEFKKEQIDSFQDVKKL 367

Qy 491 VLGSVTINLSTDATKNEFTKFKDKPTSATNKAGETLMVNDDEVIVKTYGKNEFYLKFG 550
Db 368 LVQGVLSLLPSEGNKAAFOHEIEQ-----NGVKATVCCS-----NLDYMSFG 410

Qy 551 ELSVGDSHVSFLOGERTATTGKAVPTTGKAKYLGNNWVGYYTG--AGTGKSFN-EAODIA 607
Db 527 HYTHIEATVSGGYFGKNAIEMGGSFSPGNAPGKQEKASVYVFGAKRQQLVQ 578

RESULT 34
US-08-867-921-61
; Sequence 61, Application US/08867921
; Patent No. 6326350
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THEISEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 82
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
; STREET: P.O. Box 1404
; City: Alexandria
; STATE: VA
; COUNTRY: USA
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
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; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,921
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/445,472
; FILING DATE: 22-MAY-1995
; APPLICATION NUMBER: US 08/361,469
; FILING DATE: 22-DEC-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm K.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 578 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; US-08-867-921-61
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Query Match      22.3%; Score 828; DB 3; Length 578;
Best Local Similarity 35.0%; Pred. No. 1.9e-48;
Matches 228; Conservative 100; Mismatches 202; Indels 122; Gaps 26;

Qy 89 EPKQDVPTDNEKEQVSIQEPAMGYAMELKLNNAHPLNPNKKEAEKRI-ALDQKDLV 147
Db 22 KPKEDEKSPQESQDDVSENGAAYGFAVKLPRNAH-FNP-KYKEKHKPLGSDWKKLQ 79

Qy 148 AVEGDLTNIIPDKNLIEYLKSSSEV-SKPEAQGGIENNTRLTHKOLSSSEKAEKVEA 206
Db 80 RGE---PNSFSERDELEKKGSSSELIESKWDGQSRVVGYNFT-----120

Qy 207 LDNALTOFAOEKYKELIENAHDKKSDARNRDLEYVKSGFNYLSGYTATDHDKKTN--YRG 264
Db 121 -----YVRSQVYVLN---KNNIDIKNIVLFG 144

Qy 265 YYGALYKYGSTAKELPOTSACYKYGYWDFMTDNLNKYDLPGLIARQOTQWRSVLSTDEY 324
Db 145 PDGYYLYKKGPEPSKELPSEKITTYKGTWYVTDAMEKQRFEG--GSAAGGDKSGALSLEE 202

Qy 325 ATLLTDKNN-KPSDYNCAIGHSSSEFVNFADKKIKGLI-SNQLSGTAVTAKE-----RYK 378
Db 203 GVL---RNOAEASSGHTDFGMTSEFVDFSDTKTIGTLYRNRRITQNNSENKQIKTTRYT 259

Qy 379 IEADHGNRRFRGSATASDKAEDSKTQHPFTSDATNKLKLEGGFYGPKGEBELAGKFLTDNNKL 438
Db 260 IQATLHGNRRFKGALAADKGA-TNGSHPPFISD-SDSLEGGFYGPKGEBELAGKFLSNDKV 317

Qy 439 FGVEGAK-RDKVE-----KTEAILDAYALGTFTNNTNKATFTTPTFKQLDNFNAKKL 490
Db 318 AAVFGAKQKDKKDGNAAGPATETVIDAYRI-----TGEEFKKEQIDSFQDVKKL 367

Qy 491 VLGSVTINLSTDATKNEFTKFKDKPTSATNKAGETLMVNDDEVIVKTYGKNEFYLKFG 550
Db 368 LVQGVLSLLPSEGNKAAFOHEIEQ-----NGVKATVCCS-----NLDYMSFG 410

Qy 551 ELSVGDSHVSFLOGERTATTGKAVPTTGKAKYLGNNWVGYYTG--AGTGKSFN-EAODIA 607
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Db 411 KLSKENDDMFQGVRTTPVS-DVAARTEANAKYRGTWGYIANGTWSGSEASQEGGNRA 469
Qy 608 DFDDFERKSVKGLITTOGRTPDVPENIKGEIAGNGWTKASTTTKADAGGYKIDSSSTGKS 667
Db 470 EFDVDFETKISGLTAKDRTSPFTITAMIKDNGFSGVAKTGE---NGFALDPQNTGNS 526
Qy 668 IVIE-NAEVTGGFYGPANEMGGSFTH-----DTDDSKASVVFVGTGKQOEYK 713
Db 527 HYTHIEATVSGFYGKNAIEMGGSFSPGNAPEGKQEKASVVFVGAQRQOLVQ 578

RESULT 35
US-08-064-174-1
; Sequence 1, Application US/08064174
; Patent No. 5618540
; GENERAL INFORMATION:
; APPLICANT: QUENTIN-MILLET, Marie-Jose
; APPLICANT: LISSOLO, Ling
; TITLE OF INVENTION: SUBUNIT VACCINE FOR NEISSERIA
; TITLE OF INVENTION: MENINGITIDIS INFECTIONS AND CORRESPONDING PURIFIED
; TITLE OF INVENTION: SUBUNITS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
; STREET: George Mason Bldg., Washington & Prince Sts.
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/064,174
; FILING DATE: 25-MAY-1993
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 91 12176
; FILING DATE: 03-OCT-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Rea, Teresa Stanek
; REGISTRATION NUMBER: 30,427
; REFERENCE/DOCKET NUMBER: 016100-001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 703/836-6620
; TELEFAX: 703/836-2021
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 579 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; US-08-064-174-1

Query Match 22.2%; Score 824.5; DB 1; Length 579;
Best Local Similarity 34.6%; Pred. No. 3.2e-48;
Matches 225; Conservative 105; Mismatches 202; Indels 119; Gaps 25;

Qy 89 EPKYQDVPTDKNEKEQVSSIOEPAMGYAMELKLNAHPLNPNKNKEABKRI-ALDQKDLV 147
Db 22 KPYDEKSPQESQDDVSNSGAAYGFAVKLPRENAH-FNP-KYKHKPLGSDMKKIQ 79
Qy 148 AVEGLTNIPDKNLIIEVLKKSSEVW-SKFAQKGGIENNTLRLTHKLSSEKQEAKEYEA 206
Db 80 RGE---PNSFSEDERLEKRGSSSELIESKWDGSGRVVGYTNFT-----120
Qy 207 LDNALTQPAQEKYKELIENAHDKSDARNRDLVYKSGFNYLSGYTATDHDKKTN--YRG 264
Db 121 -----YVRSGYVYLN---KXNIDIKNNIVLFG 144

Qy 265 YYGALYYKSETAKELPQTSKAYKYGWDFMTDATLDNKYITDLPGIARQOTWRSLSVSTDEY 324
Db 145 PDGLYYTKGPEPSKELPSEKITTYGTWYVTDAMEKORFEGLSAAGDGKSGALSALSEE- 203
Qy 325 ATLLTDKNNKPSDNGAYGHSSEFDVNFADKIKIGKLI-SNQLSGTAVTAKE----RYKI 379
Db 204 -GVLNRQAEASSGHTD-FGMTSBEVDFSDKTIKGTLYRNRIITONNSENKQIKTRYTI 261
Qy 380 EADHGNRFRGSATASKAEDSKTQHPTSDATNKLGGFYGPKEGELAGKFLDNDKLF 439
Db 262 QATLHGNRFRKGKALADKGA-TNGSHPFISD-SDSLEGGFYGPKEGELAGKFLSNDKVA 319
Qy 440 GVFGAK-RDXVE-----KTEALLDAVALGTFNNTNKATFTFTKOLDNFGNAKKLV 491
Db 320 AVFGAKQKDKKXGNAAGPATETVIDAYRI-----TGSEFFKKEQIDSFQDVKKLL 369
Qy 492 LGSTVINLSTDATKNEFTKTKDKPTSATNKAGETLMVNDVIVTKYGNFYKFKFGE 551
Db 370 VDGVELSLLPSEGNKAAPQHEIEQ-----NGVKATVCCS-----NLDYMSFGK 412
Qy 552 LSVGDSHVSFLQGERATTGKAVPTTGKAKYLGNNWVGYITG--AGTKGSFN-BAQDIAD 608
Db 413 LSKENKDDMFQGVRTTPVS-DVAARTEAKYRGTTGTYGIANGTWSGSEASQEGGNRAE 471
Qy 609 FDDFERKSVKGLITTOGRTPDVPENIKGEIAGNGWTKASTTKADAGYKIDSSSTGKSI 668
Db 472 FDDVDFETKISGLTAKDRTSPFTITAMIKDNGFSGVAKTGE---NGFALDPQNTGNSH 528
Qy 669 VIE-NAEVTGGFYGPANEMGGSFTH-----DTDDSKASVVFVGTGKQOEYK 713
Db 529 YTHIEATVSGFYGKNAIEMGGSFSPGNAPEGKQEKASVVFVGAQRQOLVQ 579

RESULT 36
US-08-066-167-1
; Sequence 1, Application US/08066167
; Patent No. 5618541
; GENERAL INFORMATION:
; APPLICANT: QUENTIN-MILLET, Marie-Jose
; TITLE OF INVENTION: VACCINE AGAINST NEISSERIA MENINGITIDIS
; TITLE OF INVENTION: INFECTIONS
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Burns, Doane, Swecker & Mathis
; STREET: George Mason Bldg., Washington & Prince Sts.
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/066,167
; FILING DATE: 02-JUN-1993
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 91 12177
; FILING DATE: 03-OCT-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Crane-Peuzy, Sharon E
; REGISTRATION NUMBER: 36,113
; REFERENCE/DOCKET NUMBER: 016100-002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 579 amino acids
; TYPE: amino acid

Db 472 FVDFSTKISGTLAKORTSPAFITAMIKDNGFSGVAKTGE-----NGFALDPQNTGNSH 528
Qy 669 VIE-NAEVTGGFYGNANEMGGSFTH-----DTDDSKASVVFVGTGTRQOEVK 713
Db 529 YTHIEATVSGGFYGNANEMGGSFTH-----DTDDSKASVVFVGTGTRQOEVK 713
RESULT 38
US-09-405-728-3
; Sequence 3, Application US/09405728
; Patent No. 6391316
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Rioux, Clement
; APPLICANT: Schryvers, Anthony B.
; TITLE OF INVENTION: CLONING AND EXPRESSION OF HAEMOPHILUS SOMNUS
; TITLE OF INVENTION: TRANSFERIN-BINDING PROTEINS
; FILE REFERENCE: 9000-0049.20
; CURRENT APPLICATION NUMBER: US/09/405,728
; CURRENT FILING DATE: 1999-09-24
; EARLIER APPLICATION NUMBER: US 09/267,749
; EARLIER FILING DATE: 1999-03-10
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 662
; TYPE: PRT
; ORGANISM: Haemophilus somnus
US-09-405-728-3

Query Match 22.2%; Score 824; DB 3; Length 662;
Best Local Similarity 32.5%; Pred. No. 4.2e-48;
Matches 233; Conservative 99; Mismatches 249; Indels 136; Gaps 26;
Qy 58 NVGNAGGANGSGTGNAGNSGANGSGTANTPEPKYQDVPTDKNEKEQVSSIQEPAMGYAM 117
Db 13 SVALLSACSSGKGGFDLDVHTPPSSSGSRPTQVPTGQORQEIIVEEINSPALGAT 72
Qy 118 ELKLNHPLNPNKNEAEKRIALDQKOLVAVGDLTNPFDKNLIEYLKESSEVVSXFE 177
Db 73 EIPRNIEMPTTGTGKESNARVAITAOQVAPL-----SMPFNSIKEDFIKRL----- 119
Qy 178 AQKGIENNRTHDKLSEKAEKALONALTOFAQEKYKELIENAHDKKSDARNRD 237
Db 120 -----IAENTK-----KNARGDRVYFDDTDVLF-----AHDGSLAHKRD 156
Qy 238 LEYKSGFNLGTYTATD-----HDKKTNYR-----GYGALYVKGSETAKELPOTSXKYG 290
Db 157 LOYVRVG--YVLTGKRIELVSHDKKRDQFPAGWGVYVFGTSPAVTLPTQVTVYKGY 214
Qy 291 WDFMTDA-----TLDNKYT-----DLPGIARQTQWRSVSTDEYATLLTDKNNKPSDY 338
Db 215 WDFVSDAFNERTLAEDFTQENSSATSNIPG-----NQIGATSDALV-----NKKVSGE 263
Qy 339 NGAYGHSSEFVNFADKKIKGLISN-----QLSGPVAFTAKERYKIEADHGNRFGSATA 394
Db 264 KINTAHSAEFTADFGSKLSGELKNGVSVRIENQDQVTKRYKIDADIKGNRFVGSATA 323
Qy 395 SDAEDSKTQHPFTSDATNKLGGYGPKEBELAGKFLTDNKLPGVFGAKRDKV--BKT 452
Db 324 QEKSHTI-----FGKADAKRLEGGFFGPKABELAGKFLTDNKLPGVFGAKRESKDEKL 378
Qy 453 EAILDAVALGTFTNNTKATTPPTFKKLDNFGNAKLVLGSTVINLV-----STDATKN 507
Db 379 ETRFPAVKISTDSN-----KLEKETWDTFGNAYLVLDGRQPLVPESNAGTTGAGN 430
Qy 508 EFTKFTKDKPTSATFNKAGETLMWVDEIVIKTYGNFYLKFGELSGVD----- 556
Db 431 TGKNEFISTDGSHLKNTHNHNKVKYTVCC--SNLVYVVKFG--SYGEQTTANDASNST 486
Qy 557 -----SHS-----VFLQERTATTGKAVPTTGKAKYLGW-----VGYITGAGTG 597

Db 487 AGAATTHNSTLTNGHLFLTGERTSLT--DMAKQGAAYICTWQANFLSSKGVGSVDAG 544
Qy 598 KSFNEA-QDIADFDIDPERKSVKGLTTQGTDRDPVFNIGK-EIAGNCHWTGKASTTKADAG 555
Db 545 DPNRDSKSRAEFDVNFEGGKTVTGKFFDADGIQALTMDSKIEGNGFSGTAKT-----G 600
Qy 656 GYKIDSSSTGKSIIV--ENAEVTGGFYGNANEMGGSFTHDSDSKASVVFVGTGTRQO 710
Db 601 SLQDKGSTGAGITVTTDAKVDGAFYGNABEIGGTTISNGTGDKGVGVFGAKRQE 657
RESULT 39
US-07-961-522-4
; Sequence 4, Application US/07961522
; Patent No. 5417971
; GENERAL INFORMATION:
; APPLICANT: POTTER, ANDREW A.
; APPLICANT: GERLACH, GERALD F.
; APPLICANT: WILSON, PHILIP J.
; APPLICANT: ROSSI-CAMPOS, AMALIA
; TITLE OF INVENTION: VACCINES FOR ACTINOBACILLUS
; TITLE OF INVENTION: PLEURO-PNEUMONIAE
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROBERTA L. ROBINS
; STREET: 635 BRYANT STREET
; CITY: PALO ALTO
; STATE: CALIFORNIA
; COUNTRY: UNITED STATES OF AMERICA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/961,522
; FILING DATE: 19921015
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: ROBINS, ROBERTA L.
; REGISTRATION NUMBER: 33,208
; REFERENCE/DOCKET NUMBER: 9000-0015.20
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 617-8999
; TELEFAX: (415) 327-3231
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: AMINO ACID
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-07-961-522-4

Query Match 21.3%; Score 791; DB 1; Length 593;
Best Local Similarity 30.2%; Pred. No. 6.5e-46;
Matches 224; Conservative 104; Mismatches 231; Indels 182; Gaps 27;
Qy 3 HIPITLTCVALISAVLLTACGSGGSGNPAPPIPNAGSAGNAGGTGTGGTSDNVGNA 62
Db 2 HFKLNPYALAFSTLFLVAC-----SGKGSF----- 28
Qy 63 GGANGSGTGNAGNSGANGSGTANTPBPKYQDVPTDKNEKEQVSSIQEPAMGYAMELKL 122
Db 29 -----LEVRNPQTAKAEKATTSYQDETKKTKKEELKMLNEPALGYETQILRR 77
Qy 123 NAHPLNPNKNEAEKRIALDQKOLVAVGDLTNPFDKNLIEYLKESSEVVSXFEAQKGG 182
Db 78 NKAPKTETGKERNVVELSE-----DK-ITKLYQESVLEIIPHLD----- 116
Qy 183 IENNRTHDKLSEKAEKALONALTOFAQEKYKELIENAHDKKSDARNRDLETVK 242

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117 -ELNGKTTSD-----VYSHDSKRLDKNRDLKYVR 146
243 SGFNYLSYTTATDHDKNTNYGY-----GALYYKGETAKELPQTS-A-KYKGWDFM 294
147 SGYYVDGSF----NEIRNDSGPHVFKOGIDGYVYVLGVTSPKELPKGVISYKGTWDFV 202
295 TDATLDNKYT--DLPGIARQTMBSLSTDEYATLLTDRKNKPSDYG-----AYGHSE 347
203 SNINLEREDIGFDTSGDGKNVSATISITET-----VNRDHKVGEKLGDNVKGVAHSSE 255
348 FDUVFAADKIKIGKLISNQL--SGTAVTAKERYKIEADIHGNPRFGRSATASDKAESQTKQH 405
256 FAVDFDNKKLGTSLYRNGYINRNKAQVETKYSIEADIAGNFRGAKA--EKAGD----- 309
406 PFTSDATNKLGGFYGPKEELAGFLTDNKLFGVFGAKRDKVB--KTEAILDVAALGTF 464
310 PIFTD--SNYLEGGYPKAEEMAGKFFTNKSLFAVPAKSENGETTTTIERIIDATKI--- 365
465 NNTNKATFTPTFTKQLDNFGNAKKLVLGSTVINLVSATDKNEFTKKTFTDKDPTSATNK 524
366 -----DLTQFNAKELNNFGDASVLIIDGOKIDLGVNF-----K 399
525 AGETLAWNDEVIVK--TYGKNFEYIKFGBEL-----SYGDSHSVPLQERTATTGEKAVP 576
400 NSKTVEINGKTMVAACCSNLEYNKMFGLWQKEGQQVKD--NSLFLQERTAT---DKMP 455
577 TTGKAKYLGNNVGYITGAGT-----GKSFNEAQDIADFDIDPERKSVKGLTTQGRTPDV 631
456 AGGNKYKVGTMWDLVVS--KGTNWIABADNNRSGVRYTEFDVNFSDKKVNGKFLDKGGVNPV 514
632 FNIKEIAGNGWTGKASPTTKADAGGYKIDS--SSTGKSIVIEANAETVGGFYGNANEMGGS 690
515 FTVDATINGNGFISAKTSIDS--GFALDAGSSQHGNAVFSDIKVNCGFYFGTAGELGQO 571
691 FTHTDDSKASVWFTRQOE 711
572 FHHKSDNGSVGAVFGAKROIE 592

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RESULT 40

US-08-217-438-4
; Sequence 4, Application US/08217438
; Patent No. 5521072
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Gerlach, Gerald P.
; APPLICANT: Willson, Philp J.
; APPLICANT: Rossi-Campos, Amalia
; TITLE OF INVENTION: ACTINOBACILLUS PLEUROPNEUMONIAE
; TRANSFERRIN BINDING PROTEINS AND USES THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Reed & Robins
; STREET: 635 Bryant Street
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/217,438
; FILING DATE: 22-MAR-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Robins, Roberta L.
; REGISTRATION NUMBER: 33,208
; REFERENCE/DOCKET NUMBER: 9001-0015.01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-617-8999

Search completed: February 23, 2005, 20:23:21
Job time : 33.0976 secs

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OM protein - protein search, using sw model
Run on: February 23, 2005, 20:07:47 ; Search time 26.061 Seconds
(without alignments)
2039.451 Million cell updates/sec

Title: US-09-673-133-4
Perfect score: 3709
Sequence: 1 MKHPLTTLCAISAVLLTA.....DKDSSASVFGARQKEVKP 712

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA:*
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2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
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6: /cgn2_6/ptodata/1/iaa/backfiles.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	3709	100.0	712	4	US-09-059-584-51
2	2594	69.9	709	4	US-08-778-570B-15
3	2594	69.9	709	4	US-09-059-584-15
4	2569.5	69.3	707	2	US-08-949-941B-2
5	2497	67.3	689	4	US-08-778-570B-16
6	2497	67.3	689	4	US-09-059-584-16
7	1929	52.0	713	4	US-09-059-584-53
8	1922	51.8	713	4	US-09-059-584-49
9	1884.5	50.8	706	4	US-09-059-584-46
10	1851.5	49.9	702	3	US-08-613-009A-9
11	1851.5	49.9	702	4	US-08-778-570B-11
12	1851.5	49.9	702	4	US-09-059-584-11
13	1847.5	49.8	702	2	US-08-867-941-25
14	1847.5	49.8	702	3	US-09-074-658-25
15	1754.5	47.3	682	3	US-08-613-009A-10
16	1754.5	47.3	682	4	US-08-778-570B-12
17	1754.5	47.3	682	4	US-09-059-584-12
18	1088	29.3	416	4	US-09-540-236-2388
19	950	25.6	601	3	US-08-613-009A-20
20	950	25.6	601	4	US-08-778-570B-26
21	950	25.6	601	4	US-09-059-584-26
22	942.5	25.4	578	3	US-08-448-194-61
23	942.5	25.4	578	3	US-08-867-921-61
24	937	25.3	599	3	US-08-448-194-2
25	937	25.3	599	3	US-08-867-921-2
26	931.5	25.1	598	1	US-08-487-890A-97
27	931.5	25.1	598	2	US-08-478-435-97

28	931.5	25.1	598	2	US-08-337-483-97	Sequence 97, Appl
29	931.5	25.1	598	2	US-08-478-373-97	Sequence 97, Appl
30	931.5	25.1	598	3	US-08-474-671-97	Sequence 97, Appl
31	931.5	25.1	598	3	US-08-483-577A-97	Sequence 97, Appl
32	931.5	25.1	598	3	US-08-897-438-97	Sequence 97, Appl
33	931.5	25.1	598	3	US-08-637-654-97	Sequence 97, Appl
34	931.5	25.1	598	3	US-08-649-518-97	Sequence 97, Appl
35	913	24.6	593	1	US-07-961-522-4	Sequence 4, Appli
36	913	24.6	593	1	US-08-217-438-4	Sequence 4, Appli
37	913	24.6	593	1	US-08-217-438-5	Sequence 5, Appli
38	913	24.6	593	1	US-08-487-890A-100	Sequence 100, App
39	913	24.6	593	1	US-08-321-978-4	Sequence 4, Appli
40	913	24.6	593	2	US-08-710-584-4	Sequence 4, Appli
41	913	24.6	593	2	US-08-478-435-100	Sequence 100, App
42	913	24.6	593	2	US-08-337-483-100	Sequence 100, App
43	913	24.6	593	2	US-08-478-373-100	Sequence 100, App
44	913	24.6	593	3	US-08-474-671-100	Sequence 100, App
45	913	24.6	593	3	US-08-483-577A-100	Sequence 100, App

ALIGNMENTS

RESULT 1
US-09-059-584-51
; Sequence 51, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schuyvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sam & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 51:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 712 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-51

Query Match 100.0%; Score 3709; DB 4; Length 712;

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Best Local Similarity 100.0%; Pred. No. 2.2e-259;
Matches 712; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKHPLTLTCAVSAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSGTGGAGSTDAANA 60
Db 1 MKHPLTLTCAVSAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSGTGGAGSTDAANA 60

Qy 61 GSTGASSGTGSASTQKPKYQDVPTDKNKKDEVSGIQBPAMGYGVELKLRNWIPOEBEH 120
Db 61 GSTGASSGTGSASTQKPKYQDVPTDKNKKDEVSGIQBPAMGYGVELKLRNWIPOEBEH 120

Qy 121 AKINTNDVVKLEGLDKHNPFDNSIWQNIKNSKEVQTVVYNQKQNIENQIKKENKELDKTA 180
Db 121 AKINTNDVVKLEGLDKHNPFDNSIWQNIKNSKEVQTVVYNQKQNIENQIKKENKELDKTA 180

Qy 181 LKALIEKVLDDYLSLAKPIYEKININDSHDKONKARTDLYKVRSGYLYRSYGNIDIOK 240
Db 181 LKALIEKVLDDYLSLAKPIYEKININDSHDKONKARTDLYKVRSGYLYRSYGNIDIOK 240

Qy 241 KIAKTGFDGALFYKGTQTAQKLPVSEVKYKGTWDMTDAKKGQSFSPERRAGDRYSAMS 300
Db 241 KIAKTGFDGALFYKGTQTAQKLPVSEVKYKGTWDMTDAKKGQSFSPERRAGDRYSAMS 300

Qy 301 SHEYPSLLTDDKNKPDNNYNDYHSHSEFTVDFSKSLTGGFLSNLQDHHKGVTKTKRYD 360
Db 301 SHEYPSLLTDDKNKPDNNYNDYHSHSEFTVDFSKSLTGGFLSNLQDHHKGVTKTKRYD 360

Qy 361 INARHGNRFRGSATANKDNESKAKHPPTSDADNRLEGGYFYNABELAGKFLTDNKL 420
Db 361 INARHGNRFRGSATANKDNESKAKHPPTSDADNRLEGGYFYNABELAGKFLTDNKL 420

Qy 421 FGVFGAKQESAKETEALIDAYALGTFNKSGTTPAFTANSKKELDNPGNINKLVGSTV 480
Db 421 FGVFGAKQESAKETEALIDAYALGTFNKSGTTPAFTANSKKELDNPGNINKLVGSTV 480

Qy 481 IDLTQGNDFVKTIDKEKPATTTNQAQEPVNDKVRVQVCCSNLEHLKFGSLSGDNSV 540
Db 481 IDLTQGNDFVKTIDKEKPATTTNQAQEPVNDKVRVQVCCSNLEHLKFGSLSGDNSV 540

Qy 541 FLOERTATKDKDKAMPVAGNAYKRGTWAGVAGSGNTSKAYEAQPADNANRAEFVD 600
Db 541 FLOERTATKDKDKAMPVAGNAYKRGTWAGVAGSGNTSKAYEAQPADNANRAEFVD 600

Qy 601 FANKSLTGKLPNTSSDGKSAFDITATIDGNGFSGKANTPDIEGTGGLKIDSKNSESGRVI 660
Db 601 FANKSLTGKLPNTSSDGKSAFDITATIDGNGFSGKANTPDIEGTGGLKIDSKNSESGRVI 660

Qy 661 VKDAIVIGGFGPQANELGGSFTYKSNDAQNQDKDSSASVVFVGARKQOEKVP 712
Db 661 VKDAIVIGGFGPQANELGGSFTYKSNDAQNQDKDSSASVVFVGARKQOEKVP 712

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RESULT 2
US-08-778-570B-15
; Sequence 15, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7

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; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1166
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 709 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-778-570B-15

Query Match 69.9%; Score 2594; DB 4; Length 709;
Best Local Similarity 72.4%; Pred. No. 7e-179;
Matches 535; Conservative 54; Mismatches 92; Indels 58; Gaps 18;

Qy 1 MKHPLTLTCAVSAVLLTACGG--SGSNPPAPTPIPNAGGAGNAGS-----GTGGAGST 54
Db 1 MKHPLTLTCAVSAVLLTACGGSSGGFNPPASTPIPNAGSGNAGNAGGTGGANS- 59

Qy 55 DNAANAGSTGASGSGTASQKPKYQDVPTDKNKKDEVSGIQBPAMGYGVELKLRNWI 114
Db 60 -GAGNAGTGAGSAGSASTPEPKYKDVPTDENKAEVSGIQBPAMGYGVELKLRNWI 118

Qy 115 QEQEHAHAKINTNDVVKLEGLDKHNPFDNSIWQNIKNSKEVQTVVYNQKQNIENQIKKENK 174
Db 119 QEQEHAHAKINTNDVVKLEGLDKHNPFDNSIWQNIKNSKEVQTVVYNQKQNIENQIKKENK 178

Qy 175 E-----LDKTALKALIEKVLDDYLSLAKPIYEKININDSHDKONKARTDLYKVRSGYIY 229
Db 179 QRPDKLDDVALQAYIEKVLDDYLSLAKPIYEKININDSHDKONKARTDLYKVRSGYIY 238

Qy 230 RSGYSNTDIOKKTAKTGFQDGLFYKGTQTAQKLPVSEVKYKGTWDMTDAKKGQSFSGF- 288
Db 239 RSGYSNTI-IPKKTAKTGFQDGLFYKGTQTAQKLPVSEVKYKGTWDMTDAKKGQSFSGF 297

Qy 289 --ERRAGDRYSAMSSHEYPSSLTDDKNKPDNNYNDYHSHSEFTVDFSKSLTGGFLSNLQ 346
Db 298 TSQRLAGDRYSAMSSHEYPSSLTDDKNKPDNNYNDYHSHSEFTVDFSKSLTGGFLSNLQ 357

Qy 347 DHKGVKTKRYDINARINRPRGSATANKDNESKAKHPPTSDADNRLEGGYFYNPNA 406
Db 358 DGHKGVNKTARYDIDANIGYRPRGSATADTTTASAKSKHPPTSDAKNSLEGGYFYNPNA 417

Qy 407 EELAGKELTDNKLFGVFGAKQESAKE-TEALIDAYALGTFNKSGTTPAFTANSKKE 465
Db 418 EELAGKELTDNKLFGVFGAKQESAKE-TEALIDAYALGTFNKSGTTPAFTANSKKE 477

Qy 466 DNFNINKLVGSTVIDLT-----QGNDFVKTIDKEKPATTTNQAQEPVNDKVRVQV 519
Db 478 DNFNINKLVGSTVIDLTVPATKDVNEF-----KEPKSATNKAGETLMVNDVIVKT 532

Qy 520 --CCSNLEHLKFGSLSGDNSVFLQERTATKDKDKAMPVAGNAYKRGTWAGVAGSG 577
Db 533 YGYGRNFEYLFKFGSLSGSGSHSVFLQERTA-----EKAIVTEGTAKYGLNWNVYITGD 587

Qy 578 ---NTSKAY-EAQOFADNANRAEFVDVFNKSLTGKLPNTSSDGKSAFDITATIDGNGF 633
Db 588 TGTSTGKSFNEAQDIAD-----FDIDFERKSVKGLTGTQGRD--PVFNITGTQIAGNW 639

Qy 634 SGKANTPDIEGTGGLKIDSKNSESGR-VIVKDAIVIGGFGPQANELGGSFTYKSNDAQNQ 692

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Db      640 TGTAATKXANWGGYKIDS--SSTGKSVIENAKVTGGFYGPANEMGGSFTHDTD-----692
QY      693 DKSSASVVVFGARKQOEYK 711
Db      693 --DSKASVVFGTKRQEEYK 709

RESULT 3
US-09-059-584-15
; Sequence 15, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 709 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-09-059-584-15

Query Match          69.9%; Score 2594; DB 4; Length 709;
Best Local Similarity 72.4%; Pred. No. 7e-179;
Matches 535; Conservative 54; Mismatches 92; Indels 58; Gaps 18

QY      1 MKHILPTTLCVAISAVLLTACGG-SGGSNPPAPTPIPNAGGAGNAGS-----GTGGAGST 54
Db      1 MKHILPTTLCVAISAVLLTACGGSGGFNPPASTPIPNAGNSGNAGNAGGTGGANS- 59
QY      55 DNAANAGSTGGASSGTGSASTQPKPYQDPTDKNKDEVSIGIQEPAMGYGVELKLRNWTIP 114
Db      60 -GAGNAGTGGANSAGSASTPEPKYKDVPDTEKNKAEVSGIQEPAMGYGVELKLRNWTIP 118
QY      115 QQEEHAKINTNDVVKLEBDLKHPPFNSIWQNIKNSKEVQTVYTNQEKONIQIKKENK 174
Db      119 QQEEHAKINTNDVVKLEBDLKHPPFNSIWQNIKNSKEVQTVYTNQEKONIQIKKENK 178

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; TELEFAX: (716) 849-0349
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 707 residues
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; DESCRIPTION: protein
; HYPOTHEICAL: yes
US-08-949-941B-2

Query Match      69.3%; Score 2569.5; DB 2; Length 707;
Best Local Similarity 71.6%; Pred. No. 4.1e-177;
Matches 515; Conservative 68; Mismatches 115; Indels 21; Gaps 9;

Qy 1 MKHPLTLLCAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSGTGGAGSTDNAANA 60
Db 1 MKHPLTLLCAISAVLLTACGGSGSNPPAPTPIPNAGSGGNTGN-TGNAGGTDTNANA 59

Qy 61 GSTGAGSGTGSASTQPKYQDVPTDKNKKDEVSGIQEPAMGYGVELKLRNWP---QE 116
Db 60 GNTGTSSTGSASTSEPKYQDVPTPNKKEQVSIQEPAMGYAMELKLRNAHPNPNKE 119

Qy 117 QEEHAKINTNDVVKLEGLDKNPPDINSIWQNIKNSKEVQTVYNQEKQNIQIKENKEL 176
Db 120 TEKRIALDQKOLVAVEGNLTNIPEDKNLIEYLKKSPEVSKFNEQKGIENRTRLTKDL 179

Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINSHDKONKARTRDLYKVRSGYIYRSGYSNI 236
Db 180 SSEQKEAKVKAALDN-----AQEKYKELIEAHDKSDARNRDLKYKSGFNYSGYTAT 234

Qy 237 DIQKIAKTGFGALFYKGTQAKQLPVSEVKYKGTWDMTDAKKQGSFSFE--RRAGD 294
Db 235 DHDKTNVRYGYGALYYKGSSETAKELPOTSAYKYGWDFMTDALTLDNKYVTLPGIARQTQ 294

Qy 295 RYSAMSHSEYPSLLTDDKNKDDNDYNDYCHSEFTVDFSKSKSLTGLPSNLQDHHKGV-V 353
Db 295 WRSLVSTDEYATLLTDKNKPSDYNKAYGCHSEFDVNFADKKVTGKLISN---QLSGKTV 351

Qy 354 TKTRYDINARIHGNRFRGSATAIKONESKAKHPFTSDADNRLEGFGYPGNAEELAGKF 413
Db 352 TAKERYKLEADHGNRFGSAIESEKTESKHPFTSDADNRLEGFGYPGPKGELAGKF 411

Qy 414 LTDDNKLFGVFGAKOESPAKE-TEAILDAYALGTFNKSGTTNPAPTANSKKELDNFGNIN 472
Db 412 LTDDNKLFGVFGAKRESKAGEKTEAILDAYALGTFNKSGTTNPAPTANSKKELDNFGNIN 471

Qy 473 KLVLGSTVIDLTQGNDFVKTIDKEKPATTTNQAGEPLTVNDKRVQVCCSNLEHLKFGSL 532
Db 472 KLVLGSTVIDLTQGNDFVKTIDKEKPATTSNQAGEPLTVNDKRVQVCCSNLEHLKFGSL 531

Qy 533 SIGDSNVFLOGERTATGDKDKAMPVAGNAKYRGTWAGYVAGSGNTSKAYEAQFADNA 592
Db 532 SIGDSNVFLOGERTATTG--DKAMPVVGNAKYRGTWAGYVTSNGTNSKGYEAKFADNA 589

Qy 593 NRAEFDVDFAKSLTGKLIPTNTSSDGKSAFDTITIDGNFGSGKANTPDITGTGLKIDSK 652
Db 590 NRAEFDVDFAKSLTGKLIPTNTSSDGKSAFDTITIDGNFGSGKANTPDITGTGLKIDSK 649

Qy 653 NSEGRVIVKDAIVTGGYFGQANELGGSFTYKNSDAGNQDKDSASVVFQARKQOEYK 711
Db 650 NTESGRVIVKDAIVTGGYFGQANELGGSFTYKNSDAEN--KDSSASVVFQARKQOEYK 706

RESULT 5
US-08-778-570B-16
; Sequence 16, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loomsore, Sheena M.
```

```
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA: US/08/778.570B
; APPLICATION NUMBER: US/08/778.570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 16:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 689 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-778-570B-16

Query Match      67.3%; Score 2497; DB 4; Length 689;
Best Local Similarity 71.6%; Pred. No. 6.8e-172;
Matches 515; Conservative 54; Mismatches 92; Indels 58; Gaps 18;

Qy 21 CGG-SGGSNPPAPTPIPNAGGAGNAGS-----GTGGAGSTDNAANAGSGTGSAGTGSAS 74
Db 1 CGGSGGFPNPAPTPIPNAGSGNAGNAGGTGGANS--GAGNAGGTGGANSAGSAGS 58

Qy 75 TQPKYQDVPTDKNKKDEVSGIQEPAMGYGVELKLRNWPQOEBAHAKINTNDVVKLEGD 134
Db 59 TPEPKYQDVPTDENKKAESVGIQEPAMGYGVELKLRNWPQOEBAHAKINTNDVVKLEGD 118

Qy 135 LKHNPFDSNIWQNIKNSKEVQTVYNQEKQNIQIKENK-----LDKTALKALIEKVL 189
Db 119 LKHNPFDSNIWQNIKNSKEVQTVYNQEKQNIQIKENKQRPDKLDDVALQAYIEKVL 178

Qy 190 DDYLTSLAKPIYEKNINSHDKONKARTRDLYKVRSGYIYRSGYSNIDIOKKIATGFDG 249
Db 179 DDRUTELAKPIYEKNINSHDKONKARTRDLYKVRSGYIYRSGYSNI-IPKKIATGFDG 237

Qy 250 ALFYKGTQTAKQLPVSEVKYKGTWDMTDAKKQGSFSF---ERRAGDRYSAMSHSEYPS 306
Db 238 ALFYQGTQTAKQLPVQVKYKGTWDMTDAKKQGSFSFGTSQRLAGDRYSAMSHSEYPS 297

Qy 307 LLTDDKNKPDNDYNGHSHSEFTVDFSKSKSLTGLFNSLQDHHKGVTKTKRYDINARIH 366
Db 298 LLTDEKNKPDNDYNGHSHSEFTVDFSKSKSLKGLSSNIQDGHKGVNKTTRYDIDANIY 357

Qy 367 GNRFRGSATAIKONESKAKHPFTSDADNRLEGFGYPGNAEELAGKELTDNKLFGVFGA 426
Db 358 GNRFRGSATASDPTTASKSKHPFTSDAKNSLEGFGYPGNAEELAGKFTDNKLFVGFEGA 417

Qy 427 KOESEAKE-TEAILDAYALGTFNKSGTTNPAPTANSKKELDNFGNINKLVLGSTVIDLT- 484
Db 418 KRESEAKEKTEAILDAYALGTFNKPGTTNPAPTANSKKELDNFGNAKLVLGSTVIDLVP 477

Qy 485 -----QGNDFVKTIDKEKPATTTNQAGEPLTVNDKRVQV--CCSNLEHLKFGSLSIGDS 537
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Db 478 TGATKDVNEF-----KEPKSATNKAGETLWVNDVIVKTYGGRNFEYLFEGELSGS 532
Qy 538 NSVFLQERTATKGDYKAMPVAGNAKYRGTWAGVAGSG---NTSKAY-BAQPADNAN 593
Db 533 HSVFLQERTATA-----EKAVTEGTAKYLGNNVGYITGKDTGTSTGKSFNEAQDIAD--- 584
Qy 594 RAEPDVEDFANKSLTGKLPNTSSDGKSAFDITATIDGNGFSGKANTPDIETGGLKIDSKN 653
Db 595 ---FDIDFERKSVKGLTQGRQD---PVFNITGQIAGNGWTGTASTAKANVGGYKIDS-- 637
Qy 654 SESGR-VIVKDAIVIGGYGPOANELGGSFTYKSNDAQNDKQDSSASVVFQARKQOEYK 711
Db 638 SSTGKSVIENAKVTGGFYGNANEMGGSFTHDTD-----DSKASVVFQARKQOEYK 689

RESULT 6

US-09-059-584-16
; Sequence 16, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 16:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 689 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear

US-09-059-584-16
Query Match 67.3%; Score 2497; DB 4; Length 689;
Best Local Similarity 71.6%; Pred. No. 6.8e-172;
Matches 515; Conservative 54; Mismatches 92; Indels 58; Gaps 18;
Qy 21 CGGSGGNNPAPTIPNAGGAGNAGS-----GTGAGGSTDNAANAGSTGAGSSTGAS 74
Db 1 CGGSGGNNPAPTIPNAGGAGNAGGAGNAGS--GAGNAGGTGGANSAGSAS 58

Qy 75 TOKPKYQDVPDKNKKDEVSGIQBPAMGYGVVELKLRNWIPOBEHAKINTNDVVKLBGD 134
Db 59 TPEPKYKDVPTDENKNKAEVSGIQBPAMGYGVVELKLRNWIPOBEHAKINTNDVVKLBGD 118
Qy 135 LKHNPFDNSIWQNIKNSKEVQTVVNOEQKQNIENQIKKENKE-----LDKTKALKALIEKVL 189
Db 119 LKHNPFDNSIWQNIKNSKEVQTVVNOEQKQNIENQIKKENKE-----LDKTKALKALIEKVL 178
Qy 190 DDYLTSLAKPIYEKNIINDSHDKQNKARTDILKYVRSYIYRSGYSNIDIOKKIATGTGDG 249
Db 179 DDLRTSLAKPIYEKNIINDSHDKQNKARTDILKYVRSYIYRSGYSNIDIOKKIATGTGDG 237
Qy 250 ALFYKGTQTAKOLPVSEVKYKGTWDFMTDAKKGSFSSF---ERRAGDRYSAMSSHEVPS 306
Db 238 ALFYKGTQTAKOLPVSEVKYKGTWDFMTDAKKGSFSSF---ERRAGDRYSAMSSHEVPS 297
Qy 307 LLTDDKNKPDNYNDEYGHSSSEFTVDFSKSLTGLFSLNLDHKKGKVTTKRYDINARIH 366
Db 298 LLTDDKNKPDNYNDEYGHSSSEFTVDFSKSLTGLFSLNLDHKKGKVTTKRYDINARIH 357
Qy 367 GNRFRGSATANKDNESKAKHPPTSDADNRLEGGFYGNABELAGKFLTDNKLFGVFGA 426
Db 358 GNRFRGSATADTTTASAKSKHPPTSDAKNSLEGGFYGNABELAGKFLTDNKLFGVFGA 417
Qy 427 KOESEAKE-TEAILDAYALGTFNKSGTTNPAPTANSKELONFGNINKLVLGSTVIDLT- 484
Db 418 KRESEAKEKTEAILDAYALGTFNKSGTTNPAPTANSKELONFGNINKLVLGSTVIDLVP 477
Qy 485 ---QGNDFVKTIDKEKPATTTNQAGEPLTVNDKRVQV---CCSNLEHLKFGSLISGDS 537
Db 478 TGATKDVNEF-----KEPKSATNKAGETLWVNDVIVKTYGGRNFEYLFEGELSGS 532
Qy 538 NSVFLQERTATKGDYKAMPVAGNAKYRGTWAGVAGSG---NTSKAY-BAQPADNAN 593
Db 533 HSVFLQERTATA-----EKAVTEGTAKYLGNNVGYITGKDTGTSTGKSFNEAQDIAD--- 584
Qy 594 RAEPDVEDFANKSLTGKLPNTSSDGKSAFDITATIDGNGFSGKANTPDIETGGLKIDSKN 653
Db 595 ---FDIDFERKSVKGLTQGRQD---PVFNITGQIAGNGWTGTASTAKANVGGYKIDS-- 637
Qy 654 SESGR-VIVKDAIVIGGYGPOANELGGSFTYKSNDAQNDKQDSSASVVFQARKQOEYK 711
Db 638 SSTGKSVIENAKVTGGFYGNANEMGGSFTHDTD-----DSKASVVFQARKQOEYK 689

RESULT 7

US-09-059-584-53
; Sequence 53, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584

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; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 53:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-09-059-584-53

Query Match 52.0%; Score 1929; DB 4; Length 713;
Best Local Similarity 54.5%; Pred. No. 7.3e-131; Mismatches 180; Indels 52; Gaps 15;
Matches 402; Conservative 104;

Qy 1 MKHIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAG--SGTGGAGSTDN-- 56
Db 1 MKHIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNAGSAGNAGGTGTCGTGSTDNVG 60

Qy 57 -----AANAGSTGGASSTGSGASTQPKYQDVPTDKNKKDEVSGIOEPAMGYVELK 108
Db 61 NAGGANSSTGNAGSNAGNSGTSANTPEPKYQDVPTDKNEKEQVSSIOEPAMGYAMELK 120

Qy 109 LRNMP-----QOEHEHAKINTVDVKLEGDLKHNPEDNSIWQNIKNSKEVOIVYNOEK 162
Db 121 LRNAHLNPNKNKAEKRIALDQKDLVAVEGDLTNIPDKNLEIYLLKSSSEVSKFEAQK 180

Qy 163 QNIENQIKKENKELDKTKALIEKVLDDYLTSLAKPIYEKNINDSHDKQNKARTDRLKY 222
Db 181 GGIENNTLTHKDLSSQEKAUKVXALDNLATQFAQEKYKELIENAHDKKSDARNRDLEY 240

Qy 223 VRSGYIVRSYNSNIDIOKIAKTQDGALFYKGTQAKQLPVSVEYKGTWDFMTDAKGG 282
Db 241 VKSGFNLSGYTATDHDKKTNYRGYGYALYKGSSETAKELPQTSKAKYGYWDFMTDATLD 300

Qy 283 QSPSSFE--RRAGDEYSAMSSHEYPSSLTDDKNDPDNDYNGHSSEFTVDFSKSLTGG 340
Db 301 NKYTDLPGIARQTOWRSLVSTDEYATLLTDKNNKPSDYNNGAYGHSSEFDVNFADKKIKG 360

Qy 341 LFSNLQDHHKGVTKTKRYDINARIHGNRFRGSATANKONESKAKHPFTSDADNRLEGG 400
Db 361 LISN--QLSGTAVTAKERYKEADIHGNRFRGSATASDAEDSKTQHPFTSDATNKLGG 418

Qy 401 FYGNAEELAGKFLTDDNKLFGVFGAKQESBAKTEAILDAYALGTFNKSGTTNPA--FT 458
Db 419 FYGPKGEELAGKFLTDDNKLFGVFGAKRD-KVETEAILDVAALGTFN--NTNKAATFTT 474

Qy 459 ANSKKELDNFGNINKLVLGSTVIDLTQ---GNDFVKTIIDKEKATTTNQAGEPLTVNDK 514
Db 475 PFTXKQLDNFGNAKLVLGSTVINLVSTDTATKNFEFTKFTDKPTKTSATNKAGETILMWDE 534

Qy 515 VRVQCCSNLBLEHFGSLISIGDSNVFLQGBERTATKGDKAMPVAGNAKYRGTWAGYVA 574
Db 535 VIVTKYGNFYHLKFGELSVGDSHSVFLQGBERTATTG--EKAVPTTGAKYLGNNVGVIIT 592

Qy 575 CSGNTSKAYEAQOFADNANRAEFVDVFANKSLTGLKIPNTSSDGKSAFDITATIDNGNFS 634
Db 593 GAGTGKSPNEAQDIAD-----FDIDFERKSVKGLKLTQGRTD--PVENIKGEIAGNGWT 644

Qy 635 GKANTPDJETGGLKIDSKNSRGR-VIVKDAIVIGGFGYGPQANELGGSFYTKSNDAGNQD 693
Db 645 KASATTKADAGGYKIDS--SSGTGKSIVTENAEBVTGGFGYGPANEMGGSFTHDTD----- 696
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Qy 694 KDSASVWFGARKQOEYK 711
Db 697 -DSKASVWFGTKRQOEYK 713

RESULT 8
US-09-059-584-49
; Sequence 49, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; US-09-059-584-49

Query Match 51.8%; Score 1922; DB 4; Length 713;
Best Local Similarity 55.8%; Pred. No. 2.4e-130;
Matches 411; Conservative 96; Mismatches 181; Indels 48; Gaps 21;

Qy 1 MKHIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSGTGGAGSTDNAANA 60
Db 1 MKHIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNASGSGNTGN-TGNAGGTDNTANA 59

Qy 61 GSTGGASSTGSGASTQPKYQDVPTDKNKKDEVSGIOEPAMGYVELKLRNWIPEQBEH 120
Db 60 GNTGGTSGSGASTSPKQYQDVPTTPNNKEQVSSIOEPAMGYGMAKSKINLYDOOD--- 116

Qy 121 AKINTNDVVKLEG-----DLKHNPFDNSIWQNIKN---SKEVQTVYNOEKQNIENQIKKE 172
Db 117 TPLDAKNIITLDGKKQVADNQKSLPFSL--DVENKLLDGYIAKMWNEADKNAIGERIKRE 174

Qy 173 NKELDKTALKALIEKVLDDYLTSLAKPIYEKNIND-----SHDKQNKARTDRLKYVRS 225
Db 175 NEQNKKISDEBLAKKIENVRKS---PEFOQVLSISKAKTPHNSDKTKTTRDRLKYVDY 231
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QY 226 GY--IYRSGYSNIDIQ-KIAKTGFDGALFYKGTOTAKOLPVSE-VKYKGTWDFMTD-AK 280
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 232 GYLVNDANYLITVTKDKPLNWSGVGVFNGSTTAKELTQDAVKYKGHWDFMTDVAK 291
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 281 KGQSFSSPER--RAGDRYSAMSSHEYPSSLTDDKNKPNYNDYXGHSSEFTVDFSKSLT 338
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 292 KRNRFSEVKETYQAGWYTGASSKDEYNRLTAKADAAPDNYSGEYGHSEFTVDFSKSLT 351
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 339 GGLFSLNLDHKKGVTKTKRYDINARHGNFRGSATAINKDNESKAKHPFTSDADNRLE 398
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 352 GELFSLNLDHKKGVTKTKRYDINARHGNFRGSATADKAEDSKSKHPFTSHAKKLE 411
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 399 GGFYGPNAELAGKFLTDNNKLFVFGAKQBSSEAKETEAILDAVALGTFFNKSGTTPAFT 458
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 412 GGFYGPKEELAGKFLTDNNKLFVFGAKQBSSEAKETEAILDAVALGTFFNKSGTTPAFT 471
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 459 ANSKKELDNFGNINKLVLGSTVIDLTQGNDFVKID--KEKPAITTTNQAQELTVNDKVR 516
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 472 ANSKKELDNFGNAKLVLGSTVIDLVP-TDATKDVNEFEKPKSATNKAGETLWVNDVVS 530
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 517 VQVCCSNLEHLKFGSLSTGDSNVSFLQERTATKGDKDKAMPVAGNAYKIRGTWAGYVGS 576
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 531 VKTYGKNEFYLKFGELSGVGGSHSVFLQERTATTG--EKAVPTTKGAKYLGWVGYITGA 588
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 577 GNTSKAYEAOQFADNANRAEFDVDFANKSLTGKLIPTNTSSDGSSEFTVDFSKSLT 636
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 589 DSSKGTGKGTAKDIAFDIDFEKKSNGKLTTKDRQD--PVFNITGSIAGNGWTGK 646
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 637 ANTPTDIETGLKIDSKNSESGR-VIVKDAIVIGFYGPQANELGSGFTYKSNDAQNDKD 695
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 647 ASTAEANAGGYKIDS--SSTGKSIVIKDAVVTGGFYGNATEMGSGFTHNS--GN--D 698
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 696 SSASVWFGRKQOEVK 711
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 699 GKSVVFGTKK-QEVK 713
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

```

RESULT 9

```

US-09-059-584-46
; Sequence 46, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loomore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059.584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I

```

```

; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 706 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; US-09-059-584-46

Query Match 50.8%; Score 1884.5; DB 4; Length 706;
Best Local Similarity 55.8%; Pred. No. 1.2e-127;
Matches 412; Conservative 88; Mismatches 178; Indels 61; Gaps 22;

QY 1 MKHPIPLTTLCAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSGTGGAGSTDNANA 60
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1 MKHPIPLTTLCAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSGTGGAGSTDNANA 59
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 61 GSTCGASSGTGSASTQPKYQDVPTDKKKDEVSIGIOEPAMGYVELKLRNWIPOBEEH 120
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 60 GNTGTSNGTGSANTPEPKYKDVPTDENKKDEVSGIOEPAMGYGMAISKMN---LHKQD 116
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 121 AKINTNDVVKLE-----GDLKHNPFDNSIWQNIKNKSEVQTVYNOEKQNIQIKKEN 173
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 117 TPLDEKDIITLDGKKQVAKGEKSPLESLDV-ENKLLDGYIAKNNEADKNAIGRIKKDN 175
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 174 KELDRTAKLA-LIEKVLDD-----YLTSIAKPIYEKNINDSHDKQNKARTDLKYV 223
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 176 K--DKSLSKAELAKQIKEDYKSHFQOVLSSLKNGKIFHSN-----DGTTKATRDLYV 228
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 224 RSGIYRSGYSNIDIQ-KKIAKTGFDGALFYKGTOTAKOLPVSE-VKYKGTWDFMTD-AK 280
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 229 DYGYYLVNDGNYLTVTKDELWNLGPVGGVFNNGTTAKELPTQDAVKYKGHWDFMTDVAK 288
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 281 KGQSFSSPER--RAGDRYSAMSSHEYPSSLTDDKNKPNYNDYXGHSSEFTVDFSKSLT 338
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 289 QRNRFEVKNLQAGRYYGASSKDEYNRLTDEKKNKPERYNGEYGHSEFTVDFSKSLT 348
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 339 GGLFSLNLDHKKGVTKTKRYDINARHGNFRGSATAINKDNESKAKHPFTSDADNRLE 398
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 349 GELFSLNLDHKKGVTKTKRYDINARHGNFRGSATADKAEDSKSKHPFTSDAKNSLE 408
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 399 GGFYGPNAELAGKFLTDNNKLFVFGAKQBSSEAKETEAILDAVALGTFFNKSGTTPAFT 457
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 409 GGFYGPNAELAGKFLTDNNKLFVFGAKQBSSEAKETEAILDAVALGTFFNKSGTTPAFT 466
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 458 TANSKELDNFGNINKLVLGSTVIDL--TQGNDFVKIDKEKPAITTTNQAQELTVNDKV 515
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 467 TPFTKQLDNFGNAKLVLGSTVIDLVP-TDATKDVNEFEKPKSATNKAGETLWVNDKV 526
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 516 RVQV--CCSNLEHLKFGSLSTGDSNVSFLQERTATKGDKDKAMPVAGNAYKIRGTWAGYV 573
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 527 SVKTYGGRNFEYKFGELSVGTSNVSFLQERTATTG--EKAVPTTKGAKYLGWVGYI 584
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 574 AGSGNTSKAYEAOQFADNANRAEFDVDFANKSLTGKLIPTNTSSDGSSEFTVDFSKSLT 633
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 585 TGKDSKSKSFNEAQDQVAD-----FDIDFEKKSVKGLTTKDRQD--PVFNITGDIAGNGW 636
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 634 SGKANTPDIETGLKIDSKNSESGR-VIVKDAIVIGFYGPQANELGSGFTYKSNDAQNDQ 692
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 637 TGKASTTKADAGGYKIDS--SSTGKSIVIKDAEVTGGFYGNATEMGSGFTHNTD----- 689
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 693 DKDSSASVWFGRKQOEVK 711
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 690 --DSKASVWFGRKQOEVK 706
| | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

```

```

RESULT 10
US-08-613-009A-9
; Sequence 9, Application US/08613009A
; Patent No. 6090576

```

```

; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/613.009A
; FILING DATE: 08-MAR-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-542
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-613-009A-9

Query Match 49.9%; Score 1851.5; DB 3; Length 702;
Best Local Similarity 54.8%; Pred. No. 2.8e-125;
Matches 401; Conservative 96; Mismatches 184; Indels 51; Gaps 21;

Qy 1 MKHPLTTLCAISAVLLTACGGSGSNPPAPTIPNAGGAGNAGSGTGGAGSTDAANA 60
Db 1 MKHPLTTLCAISAVLLTACGGSGSNPPAPTIPNAGGAGNAGSGTGGAGSTDAANA 59
Qy 61 GSTGASGSGTASQPKYQDVPTDKNKKDEVGIOEPAMGYGVELKLRNWIPOEBEH 120
Db 60 GNTGTSNGSGSANTPEPKYQDVPTDKNKKDEVGIOEPAMGYGVELKLRNWIPOEBEH 116
Qy 121 AKINTNDVVKLEG-----DLKHPFDSIMWNIKN---SKEVOTVYNOEKONENQIKKE 172
Db 117 TPLDEKNIITLDGKKQVAEGKKSPLPESL--DVENKLLDGYIAKMNADVAKNAIGDRIKKG 174
Qy 173 NKEL-DKTALKALTEKV-----LDDYLTSLAKPIYEKNINDSHDKQNKARTDLKYRSG 226
Db 175 NKESDEBELAKQIEAVRKSHFEQOVLSSLKNKIFHSN-----DGTTKATTRDLKYVDYG 229
Qy 227 YIYRSGYSNIDIO-KKIAKTGDFDCAIFYKGTOTAKOLPVSB-VKYKGTWDFMTD-AKKGQ 283
Db 230 YYLANDGNLYTVTKDLNGLNLPVGVGVYNGTTTAKELPTQDAVKYKGHWDFMTDVARNR 289
Qy 284 SFSSFER--RAGDRYSAMSHSEYPSLLTDDKNKPDNNDYNGHSSEPTVDFSKSLTGL 341
Db 290 RFSEVKENSQAGWYGYGASSKDEYNRLTKEDSAPDGHSGYGHSEPTVDFSKSLTGL 349
Qy 342 FSNLODHHKGVTKTKEDYNARHGNFRGSAINKDNESKAKHPTSDADNRLGGP 401
Db 350 FSNLODRHKGNVTKTERYDIDANIHGNFRGSAINKDNESKAKHPTSDADNRLGGP 407

US-08-778-570B-11
; Sequence 11, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778.570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-778-570B-11

Query Match 49.9%; Score 1851.5; DB 4; Length 702;
Best Local Similarity 54.8%; Pred. No. 2.8e-125;
Matches 401; Conservative 96; Mismatches 184; Indels 51; Gaps 21;

Qy 402 YGPNABELAGKFLTDDNKLFGVGAQSEBAKE-TEAILDAYALGTTNKSCTTNPATFAN 460
Db 408 YGPKGEELAGKFLTNDNKLFGVGAQSEBAKE-TEAILDAYALGTTNKSCTTNPATFAN 465
Qy 461 SKKELDNFGNINKLVLGSTVIDLTQGNDFVKTIDKPKATTTNOAGHPLTVNDKRVQVC 520
Db 466 TEKQLDNFGNAKLVLGSTVIDLVPTDATKNEFTKDKPESATNAGETLMVNDSESVKTY 525
Qy 521 CSNLEHLKFGSLSTGSDNSVFLQGERATATKGDKKAMPVAGNAKYRGTTWAGYVAGSGNTS 580
Db 526 GKNEFYKFGELSICGSHSVFLQGERATTG--EKAVPTTGTAKYLGWVWYIITGKDTGT 583
Qy 581 KAYEAQOFADNANRAEFVDVFANKSLTGKLPNTSSDGKSAFDITATIDGNGFSGKANTP 640
Db 584 GT--GKSFTDAQDVADFDIDFGNKSVSGLKITKGRQD--PVFSITGQIAGNGWTGTASTT 639
Qy 641 DIETGGLKIDSKNSESGR-VIVKDAIVIGGYFQGANELGSGFTYKKNNDAGNQDKDSAS 699
Db 640 KADAGGYKIDS--SSTGKSIVIKDANVTGGFYGNANEMGGSFTHNAD-----DSKAS 690
Qy 700 VVFGARKQOEVK 711
Db 691 VVFGTKRQOEVK 702

RESULT 11
US-08-778-570B-11
; Sequence 11, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778.570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-778-570B-11
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QY 1 MKHIPLTTLCAVSAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGAGSTDNANA 60
 DB 1 MKHIPLTTLCAVSAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGAGSTDNANA 59
 QY 61 GSTGAGSGTGSASTQPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBSEH 120
 DB 60 GNTGTSNAGTGSANTPEPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBSEH 116
 QY 121 AKINTNDVVKLEG-----DLKHPNPDNSIQWIKN---SKEVQTVYNOEKQNIENQIKKE 172
 DB 117 TPLDEKNIITLDGKKQVAEGKSPPLPSL--DVENKLLDGYIAKNVADKNAIGDRIKKG 174
 QY 173 NKEL-DKTALKALIEKV-----LDDYLTSLAKPIYEKNINDSHDKONKARTDRLKYVRS 226
 DB 175 NKEISDEELAKQIKEAVRKSHEFQVLSLENKIFHSN-----DGTTKATTDLKYVDYG 229
 QY 227 YIYRSGYSNIDIO-KKIATKTGDFGALFYKGTQAKQLPVSE--VKYKGTWDFMTD--AKKGQ 283
 DB 230 YYLANDGNVLTVDKLNGLPGVGVFYNGITTAKEKLPQDAVKYKGHWDFMTDVANERN 289
 QY 284 SFSSPER--RAGDRYSAMSSHEYPSSLTDDKKNPDNVDYGHSEFTVDFSKSLTGGL 341
 DB 290 RFSEVKENSQAGWYGYGASSKDEYNRLTKEDSAPDGHSGEYCHSEFTVDFSKSLTGGL 349
 QY 342 FSNLQDHHKGVTKTRYDINARIHGNRFRGSATAINKDNESKAKHPETSADNRLEGGF 401
 DB 350 FSNLQDRHKGWTKTRYDIDANIHNFRGSATASNKNDTS--KHPFTSDANNRLEGGF 407
 QY 402 YGPNABELAGKFLTDNNKLFVFGAKQESAKE--TEALDAYALGTGPNKSTGTTNPAFTAN 460
 DB 466 TEKQDNFGNAGKLVGSLVGLTVDLPTDATTATKNEFTKDKPESATNEAGETLWYNDVSVKTY 525
 QY 521 CSNLEHLKFGSLSGDSNSVFLQERTATKDKKAMPVAGNAGYRGTMAGYVAGSGNTS 580
 DB 526 GKNFEYLKFGELSGSHSVFLQERTATTG--EKAVPTTGTAKYLGWVYITGKTGT 583
 QY 581 KAYEAQPADNANRAEFVDVDFANKSLITGKLIPTNSSDGSAPDITATIDGNGFSGKANTP 640
 DB 584 GT--GKSTFDQADVDFIDFGNSVSKLITKGRD--PVFSITGQIAGNGWTGTAFTT 639
 QY 641 DIETGGLKIDSKNSESER-VIVKDAIVIGGYGPOANELGSGFTYKSNDAQNDKQDSAS 699
 DB 640 KADAGGYKIDS--SSTGKSIKIDANVTGGFYGNANEMGSGFTHNAD-----DSKAS 690
 QY 700 VVFGARKQOEVR 711
 DB 691 VVFGTKRQOEVR 702

RESULT 12

US-09-584-11
 ; Sequence 11, Application US/09059584
 ; Patent No. 6440701

GENERAL INFORMATION:

APPLICANT: Myers, Lisa E
 APPLICANT: Schryvers, Anthony B
 APPLICANT: Harkness, Robin E
 APPLICANT: Loomore, Sheena M.
 APPLICANT: Du, Run-Pan
 APPLICANT: Yang, Yan-Ping
 APPLICANT: Klein, Michel H
 TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 NUMBER OF SEQUENCES: 60
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Sim & McBurney
 STREET: 6th Floor, 330 University Avenue
 CITY: Toronto
 STATE: Ontario

QY 1 MKHIPLTTLCAVSAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGAGSTDNANA 60
 DB 1 MKHIPLTTLCAVSAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGAGSTDNANA 59
 QY 61 GSTGAGSGTGSASTQPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBSEH 120
 DB 60 GNTGTSNAGTGSANTPEPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBSEH 116
 QY 121 AKINTNDVVKLEG-----DLKHPNPDNSIQWIKN---SKEVQTVYNOEKQNIENQIKKE 172
 DB 117 TPLDEKNIITLDGKKQVAEGKSPPLPSL--DVENKLLDGYIAKNVADKNAIGDRIKKG 174
 QY 173 NKEL-DKTALKALIEKV-----LDDYLTSLAKPIYEKNINDSHDKONKARTDRLKYVRS 226
 DB 175 NKEISDEELAKQIKEAVRKSHEFQVLSLENKIFHSN-----DGTTKATTDLKYVDYG 229
 QY 227 YIYRSGYSNIDIO-KKIATKTGDFGALFYKGTQAKQLPVSE--VKYKGTWDFMTD--AKKGQ 283
 DB 230 YYLANDGNVLTVDKLNGLPGVGVFYNGITTAKEKLPQDAVKYKGHWDFMTDVANERN 289
 QY 284 SFSSPER--RAGDRYSAMSSHEYPSSLTDDKKNPDNVDYGHSEFTVDFSKSLTGGL 341
 DB 290 RFSEVKENSQAGWYGYGASSKDEYNRLTKEDSAPDGHSGEYCHSEFTVDFSKSLTGGL 349
 QY 342 FSNLQDHHKGVTKTRYDINARIHGNRFRGSATAINKDNESKAKHPETSADNRLEGGF 401
 DB 350 FSNLQDRHKGWTKTRYDIDANIHNFRGSATASNKNDTS--KHPFTSDANNRLEGGF 407
 QY 402 YGPNABELAGKFLTDNNKLFVFGAKQESAKE--TEALDAYALGTGPNKSTGTTNPAFTAN 460
 DB 466 TEKQDNFGNAGKLVGSLVGLTVDLPTDATTATKNEFTKDKPESATNEAGETLWYNDVSVKTY 525
 QY 521 CSNLEHLKFGSLSGDSNSVFLQERTATKDKKAMPVAGNAGYRGTMAGYVAGSGNTS 580
 DB 526 GKNFEYLKFGELSGSHSVFLQERTATTG--EKAVPTTGTAKYLGWVYITGKTGT 583

Query Match 49.9% Score 1851.5; DB 4; Length 702;
 Best Local Similarity 54.8%; Pred. No. 2.8e-125;
 Matches 401; Conservative 96; Mismatches 184; Indels 51; Gaps 21;

QY 1 MKHIPLTTLCAVSAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGAGSTDNANA 60
 DB 1 MKHIPLTTLCAVSAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGAGSTDNANA 59
 QY 61 GSTGAGSGTGSASTQPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBSEH 120
 DB 60 GNTGTSNAGTGSANTPEPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBSEH 116
 QY 121 AKINTNDVVKLEG-----DLKHPNPDNSIQWIKN---SKEVQTVYNOEKQNIENQIKKE 172
 DB 117 TPLDEKNIITLDGKKQVAEGKSPPLPSL--DVENKLLDGYIAKNVADKNAIGDRIKKG 174
 QY 173 NKEL-DKTALKALIEKV-----LDDYLTSLAKPIYEKNINDSHDKONKARTDRLKYVRS 226
 DB 175 NKEISDEELAKQIKEAVRKSHEFQVLSLENKIFHSN-----DGTTKATTDLKYVDYG 229
 QY 227 YIYRSGYSNIDIO-KKIATKTGDFGALFYKGTQAKQLPVSE--VKYKGTWDFMTD--AKKGQ 283
 DB 230 YYLANDGNVLTVDKLNGLPGVGVFYNGITTAKEKLPQDAVKYKGHWDFMTDVANERN 289
 QY 284 SFSSPER--RAGDRYSAMSSHEYPSSLTDDKKNPDNVDYGHSEFTVDFSKSLTGGL 341
 DB 290 RFSEVKENSQAGWYGYGASSKDEYNRLTKEDSAPDGHSGEYCHSEFTVDFSKSLTGGL 349
 QY 342 FSNLQDHHKGVTKTRYDINARIHGNRFRGSATAINKDNESKAKHPETSADNRLEGGF 401
 DB 350 FSNLQDRHKGWTKTRYDIDANIHNFRGSATASNKNDTS--KHPFTSDANNRLEGGF 407
 QY 402 YGPNABELAGKFLTDNNKLFVFGAKQESAKE--TEALDAYALGTGPNKSTGTTNPAFTAN 460
 DB 466 TEKQDNFGNAGKLVGSLVGLTVDLPTDATTATKNEFTKDKPESATNEAGETLWYNDVSVKTY 525
 QY 521 CSNLEHLKFGSLSGDSNSVFLQERTATKDKKAMPVAGNAGYRGTMAGYVAGSGNTS 580
 DB 526 GKNFEYLKFGELSGSHSVFLQERTATTG--EKAVPTTGTAKYLGWVYITGKTGT 583

TELECOMMUNICATION INFORMATION:
 TELEPHONE: (416) 595-1155
 TELEFAX: (416) 595-1163
 INFORMATION FOR SEQ ID NO: 25:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 702 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 US-09-074-658-25

Query Match 49.8%; Score 1847.5; DB 3; Length 702;
 Best Local Similarity 54.8%; Pred. No. 5.5e-125;
 Matches 401; Conservative 95; Mismatches 185; Indels 51; Gaps 21;

Qy 1 MKHPLTTLCAISAVLLTACGGSGSNPPPTPIPNAGGAGNAGSGTGGAGSTDDNAANA 60
 Db 1 MKHPLTTLCAISAVLLTACGGSGSNPPPTPIPNAGGAGNAGSGTGGAGSTDDNAANA 59

Qy 61 GSTCGASSGTGASTOKPKYQDVPTDKKKDEVSIGIQEPAMGYGVELKLRNWIPOEQUEH 120
 Db 60 GNTGGTSGTGSANTPEPKYQDVPTDKKKDEVSIGIQEPAMGYGVELKLRNWIPOEQUEH 116

Qy 121 AKINTNDVVKLEG-----DLKHPFDNSIWONIKN---SKEVQTVYNOEKONIENOKKE 172
 Db 117 TPLDEKNIITLDGKKQVAGKKSPLPFL--DVENKLLDGYIAKQNVADKNAIGDRKKG 174

Qy 173 NKEL-DKTALKALIEKV-----LDDYLTSIAKPIYKRNINDSHDKQNKARTDLKYVRS 226
 Db 175 NKEISDELAQIKAEAVKSHSHEFQVQLSSLENKIFHSN-----DGTTKATTRDLKYVDY 229

Qy 227 YIYSGVSYNIDIQ-KKIAKTGPDGALFYKGTQTAKQLPVSE-VYKGTWDFMTD-AKKGQ 283
 Db 230 YLLANDGNLYLVKTDLKLNGLPVGVFYNGTTAKELPTQDAVKYKGHWDFTDVA NRN 289

Qy 284 SFSSFER--RAGDRYSAMSHSEYPSLLTDDKKNPDYNDVYGHSEFTVDFSKSLTGEL 341
 Db 290 RFSEVKENSQAGWYGGASSKDEYNRLTYKESAPDGHSGEYGHSEFTVDFSKSLTGEL 349

Qy 342 FSNLQDHHKGVTKTKRYDINARIHGNRFRGSATAINKDNESKAKHPFTSDADNRLEG 401
 Db 350 FSNLQDRHKGNTVTKRYDIDANIHGNRFRGSATASNKNDTS--KHPTSDANNRLEG 407

Qy 402 YGNABELAGLFTDDNKLFGVFGAKQSEBAKE-TEALIDAYALGTNNKSGTTNPAFTAN 460
 Db 408 YGPKGEELAGLFTDDNKLFGVFGAKRESKAEKTEALIDAYALGTNNKSGTTNPAFTAN 465

Qy 461 SKKELDNFGNTKLVGSLTDLTGQNDVFVTIDKEKPAITNOAGBELTVNDKVRVQC 520
 Db 466 TEKQLDNFGNAKLVGSLTDLTGQNDVFVTIDKEKPAITNOAGBELTVNDKVRVQC 525

Qy 521 CSNLEHLKFGSLISGDSNVFLQBERTATKGDKDKAMPVAGNAYKRGTTWAGYVAGSGN 580
 Db 526 GKNFEYLFKFGSLISGDSNVFLQBERTATKGDKDKAMPVAGNAYKRGTTWAGYVAGSGN 583

Qy 591 KAYBAQFADNANRAEPDVPFANKSLTKLIPNTSSDGKSAFDITATIDGNGFGSKANTP 640
 Db 594 GT--GKSTPDQADVDFIDFGNKSGLITKGRQD--PVFSITQIAGNGWGTASTT 639

Qy 641 DIETGLKIDSKNSESGR-VIVKDAIVIGGFYQANELGGSFFYKSNAGNDAGNQDKSSAS 699
 Db 640 KADAGGYKIDS--SSTGKSIKDAIVNVTGGFYGNANEMGSGFTNAD-----DSKAS 690

Qy 700 VVFGARKQOEKV 711
 Db 691 VVFGTKRQOEKV 702

RESULT 15
 US-08-613-009A-10
 Sequence 10, Application US/08613009A
 Patent No. 6090576
 GENERAL INFORMATION:

APPLICANT: Myers, Lisa E
 APPLICANT: Schryvers, Anthony B
 APPLICANT: Harkness, Robin E
 APPLICANT: Loomore, Sheena M.
 APPLICANT: Du, Run-Pan
 APPLICANT: Yang, Yan-Ping
 APPLICANT: Klein, Michel H
 TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 NUMBER OF SEQUENCES: 31
 CORRESPONDENCE ADDRESSES:
 ADDRESSSEE: Sim & McBurney
 STREET: 6th Floor, 330 University Avenue
 CITY: Toronto
 STATE: Ontario
 COUNTRY: Canada
 ZIP: M5G 1R7
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patentin Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/613,009A
 FILING DATE: 08-MAR-1996
 CLASSIFICATION: 435
 ATTORNEY/AGENT INFORMATION:
 NAME: Stewart, Michael I
 REGISTRATION NUMBER: 24973
 REFERENCE/DOCKET NUMBER: 1038-542
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (416) 595-1155
 TELEFAX: (416) 595-1163
 INFORMATION FOR SEQ ID NO: 10:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 682 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 US-08-613-009A-10

Query Match 47.3%; Score 1754.5; DB 3; Length 682;
 Best Local Similarity 53.5%; Pred. No. 2.7e-118;
 Matches 381; Conservative 96; Mismatches 184; Indels 51; Gaps 21;

Qy 21 CGSGGSGNPPPTPIPNAGGAGNAGSGTGGAGSTDDNAANAGSGTGGAGSGTGSASTQPKY 80
 Db 1 CGSGGSGNPPPTPIPNAGGAGNAGSGTGGAGSTDDNAANAGSGTGGAGSGTGSASTQPKY 59

Qy 81 QDVPTDKKKDEVSIGIQEPAMGYGVELKLRNWIPOEQUEHAKINTNDVVKLEG-----DL 135
 Db 60 QDVPTDKKKDEVSIGIQEPAMGYGVELKLRNWIPOEQUEHAKINTNDVVKLEG-----DL 135

Qy 136 KHPFDNSIWONIKN---SKEVQTVYNOEKONIENOKKEKEL-DKTALKALIEKV--- 188
 Db 117 KKSPLPFL--DVENKLLDGYIAKQNVADKNAIGDRKKNKEISDELAQIKAEAVKRS 174

Qy 189 --LDDYLTSIAKPIYKRNINDSHDKQNKARTDLKYVRSYIYSGVSYNIDIQ-KKIAKT 245
 Db 175 HEFQVQLSSLENKIFHSN-----DGTTKATTRDLKYVDYGYVGLANDGNLYLVTKDKLWNL 229

Qy 246 GFDGALFYKGTQTAKQLPVSE-VYKGTWDFMTD-AKKGSGFSFSEF--RAGDRYSAMSS 301
 Db 230 GPVGVFYNGTTAKELPTQDAVKYKGHWDFTDVA NRNFRFSVKENSQAGWYTGASSK 289

Qy 302 HEYPSLLTDDKKNPDYNDVYGHSEFTVDFSKSLTGGLFSLNLODHHKGVTKTKRYDI 361
 Db 290 DEYNRLTKGDSAPDGHSGEYGHSEFTVDFSKSLTGGLFSLNLODHHKGVTKTKRYDI 349

Qy 362 NARIHGNRFRGSATAINKDNESKAKHPFTSDADNRLEGFGYGNABELAGLFTDDNKL 421
 Db 350 DANIHGNRFRGSATASNKNDTS--KHPTSDANNRLEGFGYGNABELAGLFTDDNKL 407

Qy 422 GVFGAKQSEBAKE-TEALIDAYALGTNNKSGTTNPAFTANSKELDNKLVGSLTV 480


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Db 408 GVFGAKRESKAEKTEALDAYALGTFTSNT--TFTPTTEKQDNDNFGNAKLVLGSTV 465
Qy 481 IDLTQGNDFVKTIDKEKPAATTNOAGEPLTVNDKVRVQVCCSNLEHLKFGSLSIGDSNSV 540
Db 466 IDLVPTDATKNEFTKDKPESATNEAGETLWVNDVSVKTYGKNPEYLKFGELSIGGSHSV 525
Qy 541 FLOQERTATKGDOKKAMPVAGNAKYRTGWTWAGYVAGSGNTSKAYEAQPADNANRAEPDVD 600
Db 526 FLOQERTATTG--EKAVPTTGTAKYLGNNVGYITGKTGTGT--GKSPDQADVADFDID 581
Qy 601 FANKSLTKLIPNTSSDGKSAFDITATIDGNGFSGKANTPDIETGGLKIDSKNSESGR-V 659
Db 582 FGNKSVSGKLITKGRQD--PVFSITGTAGNGWTGTASTTTKADAGGYKIDS--SSTGKSI 637
Qy 660 IVKDAIVTGGFYGPANELGGSFTYKSNDAQNDKQDSSASVVFGARQOEYK 711
Db 638 VIKDANVTGGFYGPANEMGGSFTHNAD-----DSKASVVFGTGRQOEYK 682

RESULT 16
US-08-778-570B-12
; Sequence 12, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 682 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-778-570B-12

Query Match 47.3%; Score 1754.5; DB 4; Length 682;
Best Local Similarity 53.5%; Pred. No. 2.7e-118;
Matches 381; Conservative 96; Mismatches 184; Indels 51; Gaps 21;
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Qy 21 CGSGGSGNPPAPTPIPNAGGAGNAGSGTGGAGSTDAANAGSTGAGSGTGASSTOKPKY 80
Db 1 CGSGGSGNPPAPTPIPNAGSGNTGN--TGNAGGTDNTANAGTGTGNTGSGTANTPEPKY 59
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Qy 81 QDVPTDKKDKDEVSIGIQEPAMGYGVBLKLRNWIPOQOEHEAKINTNDVVKLEG-----DL 135
Db 60 QDVPTKNEKDKVSSIQEPAMGYGMAKSKIN---LHNRQDTPLDKKNITLTDGKKVAEG 116
Qy 136 KHNPFDSINWNIQN---SKEVQTVYNQEKONIEQIKKENKEL-DKTALKALIEKV--- 188
Db 117 KKSPLPFSL--DVNKLKLDGVIAKNNVADKNAIGDRIKKGNKEISDBELAKQIKEAVRKS 174
Qy 189 --LDYITSLAKPIYEKNNINDSHDKONKARTDILKYVRSYIYRSGYSNIDIQ-KKIAKT 245
Db 175 HEFOQVLSLENKIFHSN-----DGTTKATTRDLKYVDYGYVYLANDGNYLTVTKDKLWNL 229
Qy 246 GFDGALFYKGTQATAQI.PVSE-VKYKGTWDFMTD-AKKGOSFSSFER--RAGDRYSAMSS 301
Db 230 GPVGGVFYNGTTTAKELPTQDAVKYKHWDFMTDVANRRNRFBSVKENSQAGWYYGASSK 289
Qy 302 HEYPSLTLTDDKKNPDNDYDEGHSSSEFTVDFSKSLTGGLPFSLNLODHHKGVTKTVYDI 361
Db 290 DEYNRLLTKEDSAPDGHSGHSGSEFTVNFPEKKLTGKLPFSLNLODRHKGVTKTVYDI 349
Qy 362 NARIHGNRFRGSATAINKDNESKAKHPFTSDADNRLEGGFYGPNAEELAGKFLTDDNKLF 421
Db 350 DANIHGNRFRGSATASNKNDTS--KHFTSDANNRLEGGFYGPKEELAGKFLTNDNKLF 407
Qy 422 GVFGAKOESBAKE-TEALDAYALGTFNKSGTTPAFTANSKKELDNFGNINKLVLGSTV 480
Db 408 GVFGAKRESKAEKTEALDAYALGTFTSNT--TFTPTTEKQDNDNFGNAKLVLGSTV 465
Qy 481 IDLTQGNDFVKTIDKEKPAATTNOAGEPLTVNDKVRVQVCCSNLEHLKFGSLSIGDSNSV 540
Db 466 IDLVPTDATKNEFTKDKPESATNEAGETLWVNDVSVKTYGKNPEYLKFGELSIGGSHSV 525
Qy 541 FLOQERTATKGDOKKAMPVAGNAKYRTGWTWAGYVAGSGNTSKAYEAQPADNANRAEPDVD 600
Db 526 FLOQERTATTG--EKAVPTTGTAKYLGNNVGYITGKTGTGT--GKSPDQADVADFDID 581
Qy 601 FANKSLTKLIPNTSSDGKSAFDITATIDGNGFSGKANTPDIETGGLKIDSKNSESGR-V 659
Db 582 FGNKSVSGKLITKGRQD--PVFSITGTAGNGWTGTASTTTKADAGGYKIDS--SSTGKSI 637
Qy 660 IVKDAIVTGGFYGPANELGGSFTYKSNDAQNDKQDSSASVVFGARQOEYK 711
Db 638 VIKDANVTGGFYGPANEMGGSFTHNAD-----DSKASVVFGTGRQOEYK 682

RESULT 17
US-09-059-584-12
; Sequence 12, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 682 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-12
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, FILING DATE: 14-APR-1998
, CLASSIFICATION:
, PRIOR APPLICATION DATA:
, APPLICATION NUMBER: US 08/778,570
, FILING DATE: 03-JAN-1997
, CLASSIFICATION:
, ATTORNEY/AGENT INFORMATION:
, NAME: Stewart, Michael I
, REGISTRATION NUMBER: 24973
, REFERENCE/DOCKET NUMBER: 1038-794
, TELECOMMUNICATION INFORMATION:
, TELEPHONE: (416) 595-1155
, TELEFAX: (416) 595-1163
, INFORMATION FOR SEQ ID NO: 12:
, SEQUENCE CHARACTERISTICS:
, LENGTH: 682 amino acids
, TYPE: amino acid
, STRANDEDNESS: single
, TOPOLOGY: linear
US-09-059-584-12

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Query Match	47.3%	Score 1754.5	DB 4	Length 682
Best Local Similarity	53.5%	Pred. No. 2.7e-118		
Matches	381	Conservative	96	Mismatches 184
			Indels	51
			Gaps	21
Qy	21	CGSGGSGNPAPPTPIPNAGGAGNAGSGTGGAGSTDNANAGSTCGASGSGTGSASTQPKY	80	
Db	1	CGSGGSGNPAPPTPIPNASGSGNTGN--TGNAGGTDNTANAGTNGTNGSGTGSANTPBPKY	59	
Qy	81	QDVPTDKNKDEVSIGIQEPAMGYGVLEKLNRWIPQOEHEHAKINTVNDVKLEG----	DL 135	
Db	60	QDVPTKEKNDKVSSIQEPAMGYGMALSKIN--LHNRQDTPLDEKNITLTDGKKQVABG	116	
Qy	136	KHNPFDNSIQWNIKN---SKEVQTVYQOEKONIENQIKKENKEL-DKTALKALIEKV---	188	
Db	117	KXSPLPFESL--DVENKLLDGYIAKXNVADKNAIGDRICKGKKEISDEBELAQIKEAVRKS	174	
Qy	189	--LDDYLTLTSLAKPIYEKININDSHDKONKARTPDLKYVRSYIYSGVSNIDIQ-KKI	245	
Db	175	HEFOQVLUSSLENKIFHNSN---DGTTKATTRDLKYVDYGYLLANDGNLYLTVDTKDLWNL	229	
Qy	246	GFDCALEFYKGTQAKQLPVABE-VRYKGTWDPMTD-AKKGOSFSSFER--RAGDRYSAMSS	301	
Db	230	GPVGGVEYNGTTTAKELPTQDAVKYKHWDPMTDVANRRNRFSEVKENSQAGWYYGASSK	289	
Qy	302	HEYPSLLTDKNKPDNDNYDEYGHSESEFTVPFSKSLTGGLPSNIODHHKGVKVTTKYDI	361	
Db	290	DEYNRLTLTKDSAPDGHSGYGHSESEFTVPFKKKLTKGLFSLNQDRKHGNVTTKERYDI	349	
Qy	362	NARLHGNRPFSGSATAINKDNESKAKHPTSDADNRLGGFVGPNAELAGKFLTDNKNLF	421	
Db	350	DANLHGNRPFSGSATASNKNDS---KHPFTSDANNRLGGFGFPGKEELAGKFLTDNKNLF	407	
Qy	422	GVFCAKQESBAKE--TEAILDAYALGTTPNKSQTTNPATFANSKKELDNFGNINKVLG	480	
Db	408	GVFCAKRESKAEKTEAILDAYALGTNTSNAT--TFTPTTEKQLDNFGNAKVLV	465	
Qy	481	IDLTOGNDPVKTIIDKEKPAITTNQAGBPLTVNDKRVQVCCSNLEHLKFGSLSTGDNSV	540	
Db	466	IDLVPDTATKNEFTKDKPESATNEAGETLMVNDVSVKTYGKNFYLLKFGSLSGGSHV	525	
Qy	541	PLQGERATKGDKDKAMPVAGNAKYRGTWAGYVAGSGNTSKAYEAOQAPADNANRAEP	600	
Db	526	PLQGERATTTG--EKAVPTTGATKYLGNWVGVIYTKDGTGT--GKSGFTDAQDVAD	581	
Qy	601	FANKSLTGKLIPINTSSDGSAFDTITATIDGNFGSGKANTPIDETGGLKIDSKNS	659	
Db	582	FGNKSVSGLITTKGRQD--PVFSGITGQIAGNGWTGTASTTKADAGGYKIDS--S	637	
Qy	660	IVKDAILVIGFYGPQANELGGSFTYKNSDNAGNQDKDSASVVFGARQQOEYK	711	
Db	638	VIKDANTVGGFYGPANEMGSGFTNAD-----DSKASVVFCTKQOEYK	682	

RESULT 18

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US-09-540-236-2388
; Sequence 2386, Application US/09540236
; Patent No. 6673910
; GENERAL INFORMATION:
; APPLICANT: Gary L. Breton et al.
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID
; TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
; FILE REFERENCE: 2709.2005-001
; CURRENT APPLICATION NUMBER: US/09/540,236
; CURRENT FILING DATE: 2000-04-04
; NUMBER OF SEQ ID NOS: 3840
; SEQ ID NO 2388
; LENGTH: 416
; TYPE: PRT
; ORGANISM: M.catarrhalis
US-09-540-236-2388

```

[illegible]

RESULT 19

US-08-613-009A-20
 : Sequence 20, Application US/08613009A
 : Patent No. 6090576
 : GENERAL INFORMATION:
 : APPLICANT: Myers, Lisa E
 : APPLICANT: Schryvers, Anthony B
 : APPLICANT: Harkness, Robin E
 : APPLICANT: Loosmore, Sheena M.
 : APPLICANT: Du, Run-Pan
 : APPLICANT: Yang, Yan-ping
 : APPLICANT: Klein, Michel H
 : TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 : NUMBER OF SEQUENCES: 31
 : CORRESPONDENCE ADDRESS:
 : ADDRESSEE: Sim & McBurney
 : STREET: 6th Floor, 330 University Avenue
 : CITY: Toronto
 : STATE: Ontario
 : COUNTRY: Canada
 : ZIP: M5G 1R7

QY 353 VTKRYDINARIHGNFRGSAITAKDNESKAKHPTSDADNRLEGFGYGNABELAGK 412
DB 273 QIKTRYTIQATLHGNRFGKALADK-GATNGSHPPFISDS-LEGFGYGNABELAGK 330
QY 413 FLTDNKLFGVFGAKQSE-----AKETRAILDALGTFNKGSTTNPFTANSKKEL 465
DB 331 FLSDNKAFAVFGAKQKDGKXGNAAGPATETVIDAYRI-----TGEEF---KKEQI 379
QY 466 DNFNINIKLVGSGTVIDL--TQND--FVKTDKEKPAATTNQAGEPLTVNDKRVQVCC 521
DB 380 DSFGDVKKLLVDGVLSLPPSEGNKAAFOHEIQ-----NGVKATVCC 422
QY 522 SNLEHLKFGSLSGDSNSVFLQERTATKGDKKAMPVAGNAKYRGTVAGVAGSGNTSK 581
DB 423 SNLDYMSFGKLSKENKDDMFQGVTPV---SDVAARTEANAKYRGTVAGVIA-NGTWS 478
QY 582 AYEAOQFADNANRAEFVDVFNKSLTGKLIPTSSDGKS-AFDITATIDGNGFSGKANTP 640
DB 479 GEASNQFTEGNGRAEFDVDFSTKISGTL---TAKDRTPAFTITAMIKDNGFSGVAKTG 535
QY 641 DIETGGLKIDSKNSSEGRVIVKDAIVIGGYPQANELGGSFTYKSN-DAGNQKDSAS 699
DB 536 E---NGFALDPQNTGNSHYTHIEATVSGGFGKNAIEMGGSFSPGNAPEGKQBK---AS 589
QY 700 VFGARKQOEVK 711
DB 590 VFGARKQQLVQ 601

RESULT 21

US-09-594-584-26
; Sequence 26, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loomore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESS: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 601 amino acids

; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-594-584-26

Query Match 25.6%; Score 950; DB 4; Length 601;
Best Local Similarity 36.0%; Pred. No. 2.8e-60;
Matches 242; Conservative 105; Mismatches 207; Indels 118; Gaps 26;

QY 64 GGASGTGSGAST-----QPKYQDVPTDKNKKORVSGIQEPAMGYGVVELKURN--WIPQE 116
DB 24 GGSFDLDSVETVDMHSEKPYDEKSPQSDQVSENSGAAYGFAVKLPRNAHFNPKY 83
QY 117 QEEHAKINTVDVKLEGLDKHNPEDNSIQWNIKNKSEKQVTVYVQEKNIQIKENKEL 176
DB 84 KE-----XHKPLGSDWKLOQGE-----NSFSERDELEKKGSGSE- 120
QY 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKONKARTDLYKRVSGYIYSGYSNI 236
DB 121 -----LJESKWED-----CQSRVVGVTNTYVYVSGVYVILN-KNNI 154
QY 237 DIQKIAKTGDFGALFYKGTQAKOLPVSEVYKGTWDFMTDAKKGDSFSSFFERRA-GDR 295
DB 155 DIKNNIVLFGPDGGLYKKEPSKELPSEKITYKGTWDTYVDAKMEKQFEGLSAAGGDK 214
QY 296 YSAMSSEYPSLLTDDKKNPDYNDYCHSEFTVDFSKSLTGLTGLPSN----LQHHKKG 352
DB 215 SGALSAL-EGVLRNQAESSGHTD-FGMTSEFVDFSDTKTGTLRNNRITQNNSENK 272
QY 353 VTKRYDINARIHGNFRGSAITAKDNESKAKHPTSDADNRLEGFGYGNABELAGK 412
DB 273 QIKTRYTIQATLHGNRFGKALADK-GATNGSHPPFISDS-LEGFGYGNABELAGK 330
QY 413 FLTDNKLFGVFGAKQSE-----AKETRAILDALGTFNKGSTTNPFTANSKKEL 465
DB 331 FLSDNKAFAVFGAKQKDGKXGNAAGPATETVIDAYRI-----TGEEF---KKEQI 379
QY 466 DNFNINIKLVGSGTVIDL--TQND--FVKTDKEKPAATTNQAGEPLTVNDKRVQVCC 521
DB 380 DSFGDVKKLLVDGVLSLPPSEGNKAAFOHEIQ-----NGVKATVCC 422
QY 522 SNLEHLKFGSLSGDSNSVFLQERTATKGDKKAMPVAGNAKYRGTVAGVAGSGNTSK 581
DB 423 SNLDYMSFGKLSKENKDDMFQGVTPV---SDVAARTEANAKYRGTVAGVIA-NGTWS 478
QY 582 AYEAOQFADNANRAEFVDVFNKSLTGKLIPTSSDGKS-AFDITATIDGNGFSGKANTP 640
DB 479 GEASNQFTEGNGRAEFDVDFSTKISGTL---TAKDRTPAFTITAMIKDNGFSGVAKTG 535
QY 641 DIETGGLKIDSKNSSEGRVIVKDAIVIGGYPQANELGGSFTYKSN-DAGNQKDSAS 699
DB 536 E---NGFALDPQNTGNSHYTHIEATVSGGFGKNAIEMGGSFSPGNAPEGKQBK---AS 589
QY 700 VFGARKQOEVK 711
DB 590 VFGARKQQLVQ 601

RESULT 22

US-08-448-194-61
; Sequence 61, Application US/08448194
; Patent No. 6028049
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THIESEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS:


```

; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-867-921-61

Query Match      25.4%; Score 942.5; DB 3; Length 578;
Best Local Similarity 36.1%; Pred. No. 9.3e-60;
Matches 242; Conservative 103; Mismatches 207; Indels 119; Gaps 26;

Qy 64 GGASSTGASST-----QPKYQDVPTDKNKKDEVSIGIQEPAMGYGVVELKLRN--WIPOE 116
Db 4 GGGSFDLDSVETVQDMHSPKYEDEKSPESQDDVSENSGAAYGFAVKLPRNAHFNPY 63
Qy 117 QEEHAKINTNDVVKLEGLDKNPFDSIWQNIKNKEVQTVYVNOEKQNIQIKENKEL 176
Db 64 KE-----KHKPLGSMWKKLQRP-----NSFSERDELEKRGSE- 100
Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKONKARTDLYVRSYGYYSNI 236
Db 101 -----LIESKWED-----GQSRVVGVTNFTYVRSYGVYLN--KNNI 134
Qy 237 DIQKIAKTGFGALFYKGTQAKOLPVSEVKYKGTWDMTDAKKGQSFSSERRAGDRY 296
Db 135 DIKNIVLFGPDGYLYYKKEPSKELPSEKITKGTWYVDVAMEKQRFEGSAAAGDKS 194
Qy 297 SAMSSEHPSLLTDDKNKPDNDYHSHSEFTVDFSKSLTGLFSN---LQDHHKGV 353
Db 195 GALSAL-EGVLNQAEASSGHTD-FGMTSEFVDFSDKTIGTLRNNRITONNSNKQ 252
Qy 354 TKTRYDINARIGHNFRGSAITAINKNDSKAKHPFTSDADNRLEGGFYGNABELAGKF 413
Db 253 IKTRYTYIQTALHGNRFKGAALADK-GATNGSHPIFSDSDS-LEGGFYGKGEELAGKF 310
Qy 414 LTDDNKLFGVFGAKQSE-----AKETEAILDAYALGTGFKSGTINPAFTANSKELD 466
Db 311 LSNNDKVAAVFGAKQKDKGKNAAGPATETVIDAYRI-----TGEEF---KKEQID 359
Qy 467 NFGNINKVLGTVIDL--TQND--FVKTDKEKPAATTNQAGEPLTVNDKVRVQVCCS 522
Db 360 SFGDVKKLLVDGVELSLPSEGNKAFOHEIEQ-----NGVKATVCCS 402
Qy 523 NLEHLKFGSLSGDSNSVLOGERTATKGDKDKAMPVAGNAKYRGTWAGYVAGSGNTSKA 582
Db 403 NLDVNSFGKLKSKENKDDMFLQGVPTPV---SDVAARTEANAKYRGTWGYIA--NGTSWS 457
Qy 583 YEAQFADNANRAEFDVDFANKSLTGKLIPINTSSDKS-AFDITATIDGNGFSGKANTPD 641
Db 458 GEASN-QEGGNRAEFDVDFSTKISGTL---TAKDRTSPATITAMIKDNGFSGVAKTGE 513
Qy 642 IETGGLKIDSKNSSEGRVIVKDAIVIGFYGPQANELGGSFTYKSN-DAGNQDKDSSASV 700
Db 514 --NGFALDPQNTGNSHVTHTATVSGGYGKNAIEMGGSFPGNAPEGKQEK---ASV 567
Qy 701 VFGAKQGEVK 711
Db 568 VFGAKQQLVQ 578

```

RESULT 24

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US-08-448-194-2
; Sequence 2, Application US/08448194
; Patent No. 6028049
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THIESEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62

```

```

; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Burns, Doane, Swecker & Mathis
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/448,194
; FILING DATE: 23-MAY-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION NUMBER: US 08/361,469
; FILING DATE: 22-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm M.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 599 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-448-194-2

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Query Match      25.3%; Score 937; DB 3; Length 599;
Best Local Similarity 36.2%; Pred. No. 2.4e-59;
Matches 243; Conservative 103; Mismatches 206; Indels 120; Gaps 27;

Qy 64 GGASSTGASST-----QPKYQDVPTDKNKKDEVSIGIQEPAMGYGVVELKLRN--WIPOE 116
Db 24 GGGSFDLDSVETVQDMHSPKYEDEKSPESQDDVSENSGAAYGFAVKLPRNAHFNPY 83
Qy 117 QEEHAKINTNDVVKLEGLDKNPFDSIWQNIKNKEVQTVYVNOEKQNIQIKENKEL 176
Db 84 KE-----KHKPLGSMWKKLQRP-----NSFSERDELEKRGSE- 120
Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKONKARTDLYVRSYGYYSNI 236
Db 121 -----LIESKWED-----GQSRVVGVTNFTYVRSYGVYLN--KNNI 154
Qy 237 DIQKIAKTGFGALFYKGTQAKOLPVSEVKYKGTWDMTDAKKGQSFSSERRA-GDR 295
Db 155 DIKNIVLFGPDGYLYYKKEPSKELPSEKITKGTWYVDVAMEKQRFEGLSAAAGDK 214
Qy 296 YAMSSEHPSLLTDDKNKPDNDYHSHSEFTVDFSKSLTGLFSN---LQDHHKGV 352
Db 215 SGALSAL-EGVLNQAEASSGHTD-FGMTSEFVDFSDKTIGTLRNNRITONNSNK 272
Qy 353 VTTRYDINARIGHNFRGSAITAINKNDSKAKHPFTSDADNRLEGGFYGNABELAGK 412
Db 273 QIKTRYTYIQTALHGNRFKGAALADK-GATNGSHPIFSDSDS-LEGGFYGKGEELAGK 330
Qy 413 LTDDNKLFGVFGAKQSE-----AKETEAILDAYALGTGFKSGTINPAFTANSKEL 465
Db 331 FLSDNKNVAAVFGAKQKDKGNAAGPATETVIDAYRI-----TGEEF---KKEQI 379
Qy 466 DNFGNINKVLGTVIDL--TQND--FVKTDKEKPAATTNQAGEPLTVNDKVRVQVCC 521

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Db 380 DSFGDVKKLLVDGVELSLPSEGKAAAFQHEIQ-----NGVKATVCC 422
Qy 522 SNLEHLKFGSLSGDSNSVFLQBERTATKGDKAMPVAGNAKYRGTWAGYVAGSGNTSK 581
Db 423 SNLDYMFSGKLSKENKDDMFQGVRTPV---SDVAARTEANAKYRGTWYGVIA--NGTSW 477
Qy 582 AYEAAQFADNANRAEFDVDFANKSLTGKLIPTNTSSDGKS-AFDITATIDGNGFSGKANTP 640
Db 478 SGEASN-QEGGNRAEFDVDFSTKKISGTL---TAKDRTSPAFITAMIKONGFSGVAKTG 533
Qy 641 DIETGGLKIDSKNSSEGRVIVKDAIVIGGFYGPQANELGGSFTYKSN-DAGNQDKSSAS 699
Db 534 E---NGFALDPQNTGNSHYTHIEATVSGGFYGKNAIEMGGSFSPGNAPEGKQEK---AS 587
Qy 700 VVFGARKQOEVK 711
Db 588 VVFGAKRQQLVQ 599

RESULT 25
US-08-867-921-2
; Sequence 2, Application US/08867921
; Patent No. 6326350
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THIESEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS: 62
; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: VA
; COUNTRY: USA
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,921
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/445,472
; FILING DATE: 22-MAY-1995
; APPLICATION NUMBER: US 08/361,469
; FILING DATE: 22-DEC-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm K.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 599 amino acids
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; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-867-921-2

Query Match 25.3%; Score 937; DB 3; Length 599;
Best Local Similarity 36.2%; Pred. No. 2.4e-59;
Matches 243; Conservative 103; Mismatches 206; Indels 120; Gaps 27;

Qy 64 GGASSGTGSAST-----QKPKYQDVPTDKNKKDEVSIGQEPAMGYGVGVELKRN--WIPOE 116
Db 24 GGGSFDLDSVETVQDMHISKPKYEDEKSPSQSDVSENSGAAYGFAVKLPRNAHFNPKY 83
Qy 117 QEBHAKINTNDVVVKGLEDLKHNFIDNSIWQNIKNSKEVQTVVYQEKQNIENQIKKENKEL 176
Db 84 KE-----KHKPLGSMWKKLQGEPE-----NSFSRDELEKKRGSSE- 120
Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKQNKARTDLKYVRSGYIIRSGYSNI 236
Db 121 -----LIESRWED-----GQSRVVGTYTNFTYVRSYGVYVLN--KNNI 154
Qy 237 DIOKKIAKTGFDGALFYKGTQTAKOLPVSVKYKGTWDFMTDAKKGQSFSSFERRA--GDR 295
Db 155 DIKNNIVLPFGDGLYLYKGEPSKELPSEKITTYKGTWDYVTDAMEKQRFGLGSAAGDK 214
Qy 296 YSAMSSEHYPSLLTDDKKNKPDNYNDEYGHSEFTVDFSKSLTGLFSN---LQDHHKKG 352
Db 215 SGALSALIE-EGVLRNQAEEASSGHTD-FGMTSEFEVDPSDKTIKGTLYRNNRITQNNSENK 272
Qy 353 VTKTRYDINARIHGNPRFGSATAINKDNESKAKHPPTSADNRNLEGGFYGPNAELAGK 412
Db 273 QIKTRYTIQATLHGNRFKGAALAAADK-GATNGSHPPISDSDS-LEGGFYGPKGEELAGK 330
Qy 413 FLATDDNKLFCGVGAKQESSE-----AKETEAILDAVALGTENKSGTTPNPAFTANSKEL 465
Db 331 FLSDNKNVAAVFGAKQKDKKQGENAAGPATETVIDATRI-----TGEEF---KKEQI 379
Qy 466 DNFENINKLVLGSTVIDL--TQGNDD--FVKTIIDKEPATTTNQAGEPLTVNDKVRVQVCC 521
Db 380 DSFGDVKKLLVDGVELSLPSEGKAAAFQHEIQ-----NGVKATVCC 422
Qy 522 SNLEHLKFGSLSGDSNSVFLQBERTATKGDKAMPVAGNAKYRGTWAGYVAGSGNTSK 581
Db 423 SNLDYMFSGKLSKENKDDMFQGVRTPV---SDVAARTEANAKYRGTWYGVIA--NGTSW 477
Qy 582 AYEAAQFADNANRAEFDVDFANKSLTGKLIPTNTSSDGKS-AFDITATIDGNGFSGKANTP 640
Db 478 SGEASN-QEGGNRAEFDVDFSTKKISGTL---TAKDRTSPAFITAMIKONGFSGVAKTG 533
Qy 641 DIETGGLKIDSKNSSEGRVIVKDAIVIGGFYGPQANELGGSFTYKSN-DAGNQDKSSAS 699
Db 534 E---NGFALDPQNTGNSHYTHIEATVSGGFYGKNAIEMGGSFSPGNAPEGKQEK---AS 587
Qy 700 VVFGARKQOEVK 711
Db 588 VVFGAKRQQLVQ 599

RESULT 26
US-08-487-890A-97
; Sequence 97, Application US/08487890A
; Patent No. 5708149
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
```



```
Query Match      25.1%; Score 931.5; DB 2; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 GGASGTSAST-----QKPKYQDVPTDKNKKDEVSGIOEPAMGYGVYELKLN--WIPOE 116
Db 24 GGGFDLDSVETQDMHSPKPYDEKSPQSDVSENSGAAYGFAVKLPRNAHFNPYK 83

Qy 117 QEEHAKINTDVKLEGLDHPNPNDSIWQNIKNSEKVEQTVYNOEKQNIQIKKENKEL 176
Db 84 KE-----KHKPLGSDMKLQGE-----NSFSEDELEKRGSE- 120

Qy 177 DKTALKALIEKVLDDYLTSLAKPIYKNIKNSKVEQTVYNOEKQNIQIKKENKEL 236
Db 121 -----LIESKVED-----GQSRVGVYTNFTYVRSYVYLN-KNNI 154

Qy 237 DIQKIAKTGDFGALFYGTQATKQLPVSEVKYKGTWDFMTDAKKGQSFSEFFERRA-GDR 295
Db 155 DIKNNIVLFGPDGGLYKKEPKSEKITKGTWYVDVDAKQRFEGLSAAGDK 214

Qy 296 YSAMSSEYPSLLTDDKKNKPDNDYDEYHSEFTVDFSKSLTGLFSN---LQDHHKGK 352
Db 215 SGALSALIEGVLRNQAEASSGHTD-FGMTSEFEVDFSDKTIKGTLYRNNRITQNNSENK 272

Qy 353 VTCTRYDINARIHGNRFRGSATANKDNESKAKHPPTSDADNRLEGGFYGPNAEELAGK 412
Db 273 QIKTRYTIQATLHGNRFGKALAADK-GATNGSHPPFISDS-LEGGFYGPKEELAGK 330

Qy 413 FLTDNKLFGVFGAKQ-----ESEAKETEAILDAYALGTGTFNKSGTTPAFTANSKKELD 466
Db 331 FLSDNKNVAAVFGAKQKDKDGENAAGPATVDAIYRI-----TGEFF---KKEQID 379

Qy 467 NFGNINKLVGSTVIDL--TGND--FVKTIIDKEKPATTTNQAAGEPLTVNDKVRVQVCCS 522
Db 380 SFGDVKKLLVDGVELSLPSEGNKAAFOHEIEQ-----NGVATVCCS 422

Qy 523 NLEHLKFGSLSIGDSNSVFLQERTATKGDKDKAMPVAGNAKYRGTWAGYVAGSGNTSKA 582
Db 423 NLDYMSFGKLSKENKDMFLOGVTPV---SDVAARTEANAKYRGTWGYIA--NGTWS 477

Qy 583 YEAQOFADNANRAEFVDVDFANKSLTGKLIPTSSDGKS-AFDITATIDGNGFSGKANTPD 641
Db 478 GEASN-QEGGNRAEFVDVDFSTKISGTL---TAKDRTPAFTITAMIKDNGFSGVAKTGE 533

Qy 642 IETGGLKIDSKNSSEGRVIVKDAIVIGGFYGPQANELGSGFTYKSN-DAGNQDKDSASV 700
Db 534 ---NGFALDPQNTGNSHYTHIEATVSGGFYKNAIEMGGSFSPGNAPEGKQEK---ASV 587

Qy 701 VFGAKQOEK 711
Db 588 VFGAKRQLVQ 598

RESULT 28
US-08-337-483-97
; Sequence 97, Application US/08337483
; Patent No. 5922562
; GENERAL INFORMATION:
; APPLICANT: Loesmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Mordin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
```

```
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/337,483
FILING DATE: 08-NOV-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-410 Mis:jb
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 97:
SEQUENCE CHARACTERISTICS:
LENGTH: 598 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-337-483-97
```

```
Query Match      25.1%; Score 931.5; DB 2; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 GGASGTSAST-----QKPKYQDVPTDKNKKDEVSGIOEPAMGYGVYELKLN--WIPOE 116
Db 24 GGGFDLDSVETQDMHSPKPYDEKSPQSDVSENSGAAYGFAVKLPRNAHFNPYK 83

Qy 117 QEEHAKINTDVKLEGLDHPNPNDSIWQNIKNSEKVEQTVYNOEKQNIQIKKENKEL 176
Db 84 KE-----KHKPLGSDMKLQGE-----NSFSEDELEKRGSE- 120

Qy 177 DKTALKALIEKVLDDYLTSLAKPIYKNIKNSKVEQTVYNOEKQNIQIKKENKEL 236
Db 121 -----LIESKVED-----GQSRVGVYTNFTYVRSYVYLN-KNNI 154

Qy 237 DIQKIAKTGDFGALFYGTQATKQLPVSEVKYKGTWDFMTDAKKGQSFSEFFERRA-GDR 295
Db 155 DIKNNIVLFGPDGGLYKKEPKSEKITKGTWYVDVDAKQRFEGLSAAGDK 214

Qy 296 YSAMSSEYPSLLTDDKKNKPDNDYDEYHSEFTVDFSKSLTGLFSN---LQDHHKGK 352
Db 215 SGALSALIEGVLRNQAEASSGHTD-FGMTSEFEVDFSDKTIKGTLYRNNRITQNNSENK 272

Qy 353 VTCTRYDINARIHGNRFRGSATANKDNESKAKHPPTSDADNRLEGGFYGPNAEELAGK 412
Db 273 QIKTRYTIQATLHGNRFGKALAADK-GATNGSHPPFISDS-LEGGFYGPKEELAGK 330

Qy 413 FLTDNKLFGVFGAKQ-----ESEAKETEAILDAYALGTGTFNKSGTTPAFTANSKKELD 466
Db 331 FLSDNKNVAAVFGAKQKDKDGENAAGPATVDAIYRI-----TGEFF---KKEQID 379

Qy 467 NFGNINKLVGSTVIDL--TGND--FVKTIIDKEKPATTTNQAAGEPLTVNDKVRVQVCCS 522
Db 380 SFGDVKKLLVDGVELSLPSEGNKAAFOHEIEQ-----NGVATVCCS 422

Qy 523 NLEHLKFGSLSIGDSNSVFLQERTATKGDKDKAMPVAGNAKYRGTWAGYVAGSGNTSKA 582
Db 423 NLDYMSFGKLSKENKDMFLOGVTPV---SDVAARTEANAKYRGTWGYIA--NGTWS 477

Qy 583 YEAQOFADNANRAEFVDVDFANKSLTGKLIPTSSDGKS-AFDITATIDGNGFSGKANTPD 641
Db 478 GEASN-QEGGNRAEFVDVDFSTKISGTL---TAKDRTPAFTITAMIKDNGFSGVAKTGE 533

Qy 642 IETGGLKIDSKNSSEGRVIVKDAIVIGGFYGPQANELGSGFTYKSN-DAGNQDKDSASV 700
Db 534 ---NGFALDPQNTGNSHYTHIEATVSGGFYKNAIEMGGSFSPGNAPEGKQEK---ASV 587
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Qy 701 VFGARKQOEYK 711
Db 588 VFGAKRQOLVQ 598

RESULT 29
US-08-478-373-97
; Sequence 97, Application US/08478373
; Patent No. 592841
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/478,373
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-463 MIS:vg
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-478-373-97

Query Match 25.1%; Score 931.5; DB 2; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 CGASGTCGASCT-----QKPKYQVPTDNKKDEVSIGQEPAMGYGVLEKLKN--WIPQE 116
Db 24 CGGSFDLSVETQDMHSPKPYDEKSPQBSQDDVSNSGAAYGFAVKLPERNAHFNPKY 83
Qy 117 QEEHAKINTNDVKLEGLDKINPFNSIWONIKNSKEVQTVYNQEKONIENQIKENKEL 176
Db 84 KE-----KKHPLGMDWKKLQRGEP-----NSFSRDELEKKRGSGE- 120

177 DXTALKALIEKVLDDYLTSLAKPIYKINNDSHDKQNKARTDLKYVRSYVYRSYVNI 236
121 -----LIESKWED-----GQSRVVGVTNTFYRSGYVYILN--KNNI 154
237 DIQKIAKTGFDGALFYKGTQAKQLPVSEVKYKGTWDFMTDAKKGQSFSSFFERRA--GDR 295
155 DIKNIVLFGPDGYLYYKKEPSKELPSEKITKGTWYVTDAMEKQPFEGLSGAAGDK 214
296 YSAMSHEPSLLTDDKKNPDNYNDEYHSHSEFTVDFSKSLTGLFSN-----LDQHHKKG 352
215 SGALSALF--EGLRNQAEASSGHTD--FGMTSEFEVDFSDTKTKGTLVNNRITQNNSENK 272
353 VTKTRYDINARIHGNEFRGSATANKDNESKAGHPTSDADNLEGGFYGPNAEELAGK 412
273 QIKTRYTIQATLHGNRFKGAALADK--GATNGSHPPFISDS--LEGGFYGPKGEELAGK 330
413 FLTDDNKLFGVFGAKQ-----ESEAKEBTEAILDAYALGTFFNKSGTTPNPAFTANSKKELD 466
331 FLSDNDKVAAVFGAKQKDKKXGNAAGPATEVIDAYRI-----TGEFF--KKEQID 379
467 NFGNINKVLGSTVIDL--TQND--FVKTIKKEKPATTTNQAGEPLTVNDKVRVQVCCS 522
380 SFGDVKKLLVDGVVELSLLPSEGNKAAAFQHEIEQ-----NGVKATVCCS 422
523 NLEHLKFSLSIGDSNSVFLOGERTATKGDKDKAMPVAGNNAKYRGTWAGYVAGSGNTSKA 582
423 NLDYMSFGKLSKENKDDMFLOGVPTV--SDVAARTEANAKYRGTWYGYIA--NGTSWS 477
583 YEAQFADNANRAEFVDVDFANKSLTGKLIPTNSDGS--AFDITATIDGNGFSGKANTPD 641
478 GEASN--QEGGNRAEFVDVDFSTKISGTL--TAKDRTSPATITAMIKDNGFSGVAKTGE 533
642 IETGGLKIDSKNSESGRVIVKDAIVIGGYGPOANELGGSTYKSN--DAGNQDKDSSASV 700
534 ---NGFALDPQNTGNSHYTHIEATVSGGYGKNAIEMGGSFPGNAPEGKQEK---ASV 587
701 VFGARKQOEYK 711
588 VFGAKRQOLVQ 598

RESULT 30
US-08-474-671-97
; Sequence 97, Application US/08474671
; Patent No. 6008326
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/474,671
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 530

```

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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-465 MIS.vg
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
;
US-08-474-671-97
Query Match 25.1%; Score 931.5; DB 3; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 GGASGTGSAST-----QPKYQDVPTDKKKDEVSIGIQBPAMGYGVVELKLRN--WIPOE 116
Db |||||:|||||:
24 GGSFDLDSVETQDMHSPKPYEDEKSPESQDVSNSGAAYGFAVKLPRNAHFNPY 83
Qy |||||:|||||:
117 QEEHAKINTDVKLGDLKHNPDNSIWQNIKNSKEVQTVYVNOEKQNIENQIKENKEL 176
Db :||:|||||:|||||:
84 KE-----KHKPLGSDMWKQLQRP-----NSFSERDELEKRGSGS- 120
Qy |||||:|||||:|||||:
177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKQNKARTDLYKVRSGYIYRSGYSNI 236
Db |||||:|||||:|||||:
121 -----LIESKWED-----QGSRVGVNTFYRSGYVYLN--KNNI 154
Qy |||||:|||||:|||||:
237 DIQKIATKPGDGFYKGTQAKQPVSEYKYKGTWDFMTDAKKGQSFSSFERRA--GDR 295
Db |||||:|||||:|||||:
155 DIKNNIVLFGPDGYLYYKGPSEKPEKITYKGTWDYVTDAMEKQRFEGLSAAGGDK 214
Qy |||||:|||||:|||||:
296 YSAMSSEYPSLLTDDKKNPNYDEYCHSSEFTVDFSKSLTGGLPSN----LQDHKKG 352
Db |||||:|||||:|||||:
215 SGALSALD--EGLVRNQAEASSGHTD--FGMTSEFEVDFSDTKTIGTLRYNNRITQNNSENK 272
Qy |||||:|||||:|||||:
353 VTKTQRYDINARIGHNFRGSGATANKONESKAKHPFTSDADNRLEGGFYGPNAEELAGK 412
Db |||||:|||||:|||||:
273 QIKTRYTIQATLHGNRFKGLAADK--GATNGSHPFISDSDS--LEGGFYGPKEELAGK 330
Qy |||||:|||||:|||||:
413 FLTDNDKLFYVFGAKQ-----ESEAKETEAILDAYALGTFNKSGTTNPAFTANSKKELD 466
Db |||||:|||||:|||||:
331 FLSNDKNVAAVFGAKQKDKDGENAAGPATEVIDAYRI-----TGEEF--KKEQID 379
Qy |||||:|||||:|||||:
467 NFGNINKLVGSTVIDL--TGND--FVKTTDKKPAATTNQAGEPLTVNDKVRVQVCCS 522
Db |||||:|||||:|||||:
380 SFGDVVKLLVDGVLSLSPSEGNKAAFOHEIEQ-----NGVRKATVCCS 422
Qy |||||:|||||:|||||:
523 NLEHLKGLSLGIGDSNSVFLQERTATKGDKDKAMPVAGNAKYKGTWAGYVAGSGNTSKA 582
Db |||||:|||||:|||||:
423 NLDYMSFGKLSKENKDDMFLOGVTPV---SDVAARTEANAKYKGTWGYIYA--NGTWS 477
Qy |||||:|||||:|||||:
583 YEAQOQADNANRBFVDVDFANKSUTGKLIPNTSSDGKS--AFDITATIDNGFSGKANTPD 641
Db |||||:|||||:|||||:
478 GEASN--QEGGNRAEFDVDFSTKISGTL---TAKDRTSPAFTITAMIKDNGFSGVAKTGE 533
Qy |||||:|||||:|||||:
642 IETGGLKIDSKNSSEGRVIVKDAVIGGFYGPQANELGGSTFYKSN--DAGNQDKDSASV 700
Db |||||:|||||:|||||:
534 ---NGFALDPQNTGNSHYTHTEATVSGGFYKNAIEMGGSFSPGNAPEGKQEK---ASV 587
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Qy 701 VFGARKQOEYK 711
Db |||||:|||||:
588 VFGAKRQQLVQ 598

RESULT 31
US-08-483-577A-97
; Sequence 97, Application US/08483577A
; Patent No. 6015688
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Mordin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 160
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/483,577A
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-511
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
;
US-08-483-577A-97
Query Match 25.1%; Score 931.5; DB 3; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 GGASGTGSAST-----QPKYQDVPTDKKKDEVSIGIQBPAMGYGVVELKLRN--WIPOE 116
Db |||||:|||||:
24 GGSFDLDSVETQDMHSPKPYEDEKSPESQDVSNSGAAYGFAVKLPRNAHFNPY 83
Qy |||||:|||||:
117 QEEHAKINTDVKLGDLKHNPDNSIWQNIKNSKEVQTVYVNOEKQNIENQIKENKEL 176
Db :||:|||||:|||||:
84 KE-----KHKPLGSDMWKQLQRP-----NSFSERDELEKRGSGS- 120
Qy |||||:|||||:|||||:
177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKQNKARTDLYKVRSGYIYRSGYSNI 236
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[illegible]

RESULT 32

```

RES001 32
US-08-897-438-97
; Sequence 97, Application US/08897438
; Patent No. 6262016
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pella
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-ping
; APPLICANT: Mordin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 160
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/897,438
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/483,577

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; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-608
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-649-518-97

Query Match 25.1%; Score 931.5; DB 3; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 GGASGTSAST-----QKPYQDVPTDKNKKDEYSGIQEPAMGYGVVELKLN--WIPOE 116
Db 24 GGSFDDLSVETQDMHSPKPYDEKSPQSDVSENGAAYGFAVKLPNRNHFNPXY 83

Qy 117 QEEHAKINTNDVVKLEGLDKNPFNDSTWQNKNSKEYQTVVNOEKQNIQIKENKEL 176
Db 84 KE-----KHKPLGSDMKKLQGE-----NGFSRDELEKKGSGSE- 120

Qy 177 DTKALKALIEKVLDDYLTSLAKPIYEKINSHDKQKARTDLKYVRSYIYSGYSNI 236
Db 121 -----LIESKWED-----GQSRVVGVTNFTYVRSYVYVYLN--KNNI 154

Qy 237 DIQKIATGPDGALFYKGTOTAKOLPVSEVKYGTWDFMTDAKKQGSFERRA--GDR 295
Db 155 DIKNIVLFGDGYLYYKSPKELPSEKITYGTWDFMTDAKKQGSFERRA--GDR 214

Qy 296 YSAMSSEYPSLLTDDKNKPNYNDYGHSEFTVDFSKSLTGLFSN---LQDHKKG 352
Db 215 SGALSALAE-EGVLRNQAESAASGHTD--FCMTSEFEVDFSDTKIKGLYRNRIITQNSNK 272

Qy 353 VTKYKRYDINARIHGNRFRGSATANKONESKAKHPFTSDADNRLEGFGYGNABEELAGK 412
Db 273 QIKTRYTIQATLHGNRFRGKALAADK--GATNGSHPTFSDSDS--LEGGFYGPKGEELAGK 330

Qy 413 FLTDNKLFGYVGAQKQ-----ESEAKETEALLDAYALGTGFKSGTTPNPAFTANSKELD 466
Db 331 FLSDNKAFAVFGAKQKQKDGKNGAAGPATVEIDAYRI-----TGEEF---KKGQID 379

Qy 467 NFGNINKLVLGSTVIDL--TGND--FVKTIKKEKPATTTNQAQEPLTVNDKVRVQVCCS 522
Db 380 SFGDVKKLLVDGVELSLPSEGNAKAFQHEIEQ-----NGVKATVCCS 422

Qy 523 NLEHLKFGSLISIGDNSVFLQERTATKGDKDKAMPVAGNAKYRTGWTAGYVAGSGNTSKA 582
Db 423 NLDYMSFGKSKENKDDMFLQGVTPV---SDVAARTEANAKYRTGWTGYIA--NGTSWS 477

Qy 583 YEAQFADNANRAEDVDNFANKSLTGKLIPTNTSSDGKS--AFDITATIDGNGFSKANTPD 641
Db 478 GEASN--QEGGNRAEDVDNFSTKISGTL---TAKDRTPSPATITAMIKDNGFSVAKTGE 533

Qy 642 IETGLKIDSKNSGRVIVDAIVIGGYFQANELGGSFTYKSN--DAGNQDKDSSASV 700
Db 534 ---NGFALDPQNTGNSHYTHIEATVSGGYFKNAIEMGSGSFPGNAPEGKQEK---ASV 587

Qy 701 VFGARKQOEK 711
Db 588 VFGAKRQLVQ 598

```

RESULT 35

```

US-07-961-522-4
; Sequence 4, Application US/07961522
; Patent No. 5417971
; GENERAL INFORMATION:
; APPLICANT: POTTER, ANDREW A.
; APPLICANT: GERLACH, GERALD F.
; APPLICANT: WILSON, PHILIP J.
; APPLICANT: ROSSI-CAMPOS, AMALIA
; TITLE OF INVENTION: VACCINES FOR ACTINOBACILLUS
; TITLE OF INVENTION: PLEURO-PNEUMONIAE
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROBERTA L. ROBINS
; STREET: 635 BRYANT STREET
; CITY: PALO ALTO
; STATE: CALIFORNIA
; COUNTRY: UNITED STATES OF AMERICA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/961,522
; FILING DATE: 19921015
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: ROBINS, ROBERTA L.
; REGISTRATION NUMBER: 33,208
; REFERENCE/DOCKET NUMBER: 9000-0015.20
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 617-8999
; TELEFAX: (415) 327-3231
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: AMINO ACID
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; US-07-961-522-4

Query Match 24.6%; Score 913; DB 1; Length 593;
Best Local Similarity 34.5%; Pred. No. 1.3e-57;
Matches 252; Conservative 88; Mismatches 227; Indels 164; Gaps 28;

Qy 3 HIPLTLCVALSALLTACGGSGSNPPATPIPNAGGAGNAGSGTGAGSTD--NAANAG 61
Db 2 HFKLNPVALFTSLFLVAC-----SGKSGSFDLEDVRPN 35

Qy 62 STGGASGTSASTQPKPYQDVPTDKNKKDEYSGIQEPAMGYGVVELKLNWIPQEQBEHA 121
Db 36 QTAKEAKATTS-----YQDEETKKTKBELDKLMEPALGYETQILRRNKAP--KTETG 86

Qy 122 KINTNDVVKLEGLDKNPFNDSTWQNKNSKEYQTVVNOEKQNIQIKENKELDKTAL 181
Db 87 EKXNERVVELSED-----KITKLYQESVEIIPH-----LDE--- 117

Qy 182 KALIEKVLDDYLTSLAKPIYEKINSHDKQKARTDLKYVRSYIYSGYSNI---DI 238
Db 118 -----LNGKTS-----NDVYHSDSKRLDKNRLDKYVRSYIYSGYSNFNRNDS 163

Qy 239 QKKIATGPDGALFYKGTOTAKOLPVSEV--KYGTWDFMTDAKKQGSFERRA--GDRY 296
Db 164 GFHVFKGIGDGYVYLVGVTSKELPKGVISYKGTWDFVSNINLERIDGFTSGDGKNV 223

Qy 297 SAMSSEYPSLLTDDKNKPNYNDYGHSEFTVDFSKSLTGLFSNLQDH 348
Db 224 SATS-----ITETVNRDVKVGEKLDGNEVKGVAHSSEFAVDFDNKKLTGSLYRNGYN 276

Qy 349 HGGKVTYTKRYDINARIHGNRFRGSATANKONESKAKHPFTSDADNRLEGFGYGNABE 408

```

Db 277 RNKAEVTKRYSIEADIAGNRFRGKAKA-----EKAGDPIFTDS-NYLEGGFYGPKAEE 329
Qy 409 LAGFLTDNDNKLFGVFGAKQSEAKETEAILDAYALGTFNKSGTNPFTANSKELDNF 468
Db 330 MAGKFFTNKSLFAVFAAKSENGETTTIERIIDA-----TKIDLTOFNAKELNNF 378
Qy 469 GNINKLVGSTVIDLTQGNDF--VKTIDKEKPAATTNQAGEPLTVNDKRVQV--CCSNLE 525
Db 379 GDASVLIIDGQKIDLA-GVNFKNKSTVE-----INGKTWVAVACCSNLE 421
Qy 526 HLKESGL-----SIGDSNSVFLOGERTATKGDKAMPVAGNAKRYGTWAGVVASGN 578
Db 422 YMKFGQLWQKEGKQOQVD--NSLFLQERTAT-----DK-MPAGGNYKYVGTWDALV--SKG 473
Qy 579 TSKAYEAQQFADNANRAEFVDVFNKSLTGKLIPTNTSSDGKSAFDITATIDNGFGSKAN 638
Db 474 TNWIAEADNNRESGYRTEFDVNFSDKKVNGKLPKGGVN--PVFTVDATINGNGFIGSAK 531
Qy 639 TPDITGGLKIDSKNSSESGRVIVKDAIVIGFGYGPQANELGGSFTYKSNDAQNODKSSA 698
Db 532 TSD---SGFALDAGSSQHGNAVFSDIKVNGGFGYGTAGELGGQPHHKS-----NGSV 581
Qy 699 SVVFGARKQOE 709
Db 582 GAVFGAKRQIE 592

RESULT 36

US-08-217-438-4
; Sequence 4, Application US/08217438
; Patent No. 5521072
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Gerlach, Gerald F.
; APPLICANT: Willson, Philp J.
; APPLICANT: Rossi-Campos, Amalia
; TITLE OF INVENTION: ACTINOBACILLUS PLEUROPEINOMITAE
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Reed & Robins
; STREET: 635 Bryant Street
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/217,438
; FILING DATE: 22-MAR-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Robins, Roberta L.
; REGISTRATION NUMBER: 33,208
; REFERENCE/DOCKET NUMBER: 9001-0015.01
; TELEPHONE: 415-617-8999
; TELEFAX: 415-327-3231
; TELEX:
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-217-438-4

Query Match 24.6%; Score 913; DB 1; Length 593;
Best Local Similarity 34.5%; Pred. No. 1.3e-57;

Matches 252; Conservative 88; Mismatches 227; Indels 164; Gaps 28;
Qy 3 HIPLTTLICVAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSGTGAGSTD-NAANAG 61
Db 2 HFKLNPVALAFTSLFLVAC-----SGKGSFDLEDVRPN 35
Qy 62 STGASGTSASSTQPKYQDVPTDKNKDEVSIGIQEPAMGYGVELKLRNWIPOEQEHA 121
Db 36 QTAKEAKATTS-----YQDEETKKTKBELDKLMEPALGYETQILRRNKAP--KTETG 86
Qy 122 KINTNDVVKLEGLDKNPFPDINSIWQNIKNSKEVQTVVYVQEKQNIENQIKKENELDKTAL 181
Db 87 EKNERVVELSED-----KITKLQYESVEIIPH-----LDE--- 117
Qy 182 KALIEKVLDDYLSLAKPIYEKININDSHDKONKARTDLKYVRSGYTYRSGYSNI---DI 238
Db 118 -----LNGKITS-----NDVYHSHDSKRLDKNRDLKYVRSYVYVDSFNEIRNDS 163
Qy 239 QKXIAKTGFPGALFYKGTQTAQQLPVSFV--KYKGTWDFMTDAKKGQSFERRA--GDRY 296
Db 164 GFHVFKQIDGVYVYLVGTPSKLPKGVISYKGTWDFVSNINLEREIDGFTDSGDGKNV 223
Qy 297 SAMSSHEYPSSLTDDKNKPDNYNDEYV-----HSSEFTVDSKSLTGLPSNLQDH 348
Db 224 SATS-----ITETVNRDHHKVGKJGDNEVKGVAHSSEFAVDNDKKLTGSLYRNGYIN 276
Qy 349 HKGKVTYTKRYDINARIHGNRFRGSSATAINKDNESKAKHPFTSDADNRLGGFYGPNAEE 408
Db 277 RNKAEVTKRYSIEADIAGNRFRGKAKA-----EKAGDPIFTDS-NYLEGGFYGPKAEE 329
Qy 409 LAGFLTDNDNKLFGVFGAKQSEAKETEAILDAYALGTFNKSGTNPFTANSKELDNF 468
Db 330 MAGKFFTNKSLFAVFAAKSENGETTTIERIIDA-----TKIDLTOFNAKELNNF 378
Qy 469 GNINKLVGSTVIDLTQGNDF--VKTIDKEKPAATTNQAGEPLTVNDKRVQV--CCSNLE 525
Db 379 GDASVLIIDGQKIDLA-GVNFKNKSTVE-----INGKTWVAVACCSNLE 421
Qy 526 HLKESGL-----SIGDSNSVFLOGERTATKGDKAMPVAGNAKRYGTWAGVVASGN 578
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Qy 579 TSKAYEAQQFADNANRAEFVDVFNKSLTGKLIPTNTSSDGKSAFDITATIDNGFGSKAN 638
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Qy 639 TPDITGGLKIDSKNSSESGRVIVKDAIVIGFGYGPQANELGGSFTYKSNDAQNODKSSA 698
Db 532 TSD---SGFALDAGSSQHGNAVFSDIKVNGGFGYGTAGELGGQPHHKS-----NGSV 581
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RESULT 37

US-08-217-438-5
; Sequence 5, Application US/08217438
; Patent No. 5521072
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Gerlach, Gerald F.
; APPLICANT: Willson, Philp J.
; APPLICANT: Rossi-Campos, Amalia
; TITLE OF INVENTION: ACTINOBACILLUS PLEUROPEINOMITAE
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Reed & Robins
; STREET: 635 Bryant Street
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA

RESULT 40

US-08-710-584-4
 ; Sequence 4, Application US/08710584
 ; Patent No. 5876725
 ; GENERAL INFORMATION:
 ; APPLICANT: POTTER, ANDREW A.
 ; APPLICANT: GERLACH, GERALD F.
 ; APPLICANT: WILLSON, PHILIP J.
 ; APPLICANT: ROSSI-CAMPOS, AMALIA
 ; TITLE OF INVENTION: VACCINES FOR ACTINOBACILLUS
 ; TITLE OF INVENTION: PLEUROPNEUMONIAE
 ; NUMBER OF SEQUENCES: 9
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: ROBERTA L. ROBINS
 ; STREET: 285 HAMILTON AVE, SUITE 200
 ; CITY: PALO ALTO
 ; STATE: CALIFORNIA
 ; COUNTRY: UNITED STATES OF AMERICA
 ; ZIP: 94301
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent In Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/710,584
 ; FILING DATE:
 ; CLASSIFICATION:
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/321,978
 ; FILING DATE: 12-OCT-1994
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: ROBINS, ROBERTA L.
 ; REGISTRATION NUMBER: 33,208
 ; REFERENCE/DOCKET NUMBER: 9001-0015.02
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (415) 327-3400
 ; TELEFAX: (415) 327-3231
 ; INFORMATION FOR SEQ ID NO: 4:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 593 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: peptide
 ; US-08-710-584-4

Query Match 24.6%; Score 913; DB 2; Length 593;
 Best Local Similarity 34.5%; Pred. No. 1.3e-57;
 Matches 252; Conservative 88; Mismatches 227; Indels 164; Gaps 28;

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Db	2	HFKNLPYALAFSLFVAC-----SGKGSGFDLEDVRPN 35
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Db	36	QTAKAEKATTS-----YQDEBTKTKKEELDKLMEPALGVETQILRRNKAP--KTETG 86
Qy	122	KINTNDVVKLEGDLDKXHPDINSIWQNIKNKEVQTVYVQEKQNIENQIKKENKELDKTAL 181
Db	87	EKNRERVVELSED-----KITLQYESVEIIPH-----LDE--- 117
Qy	182	KALIEKVLDDYLTSLAKPIYEKNINDSHDKONKARTDLKYVRSGYIVYRSGYSNI---DI 238
Db	118	-----LNGKTT-----NDVTHSHDSKELDKNRLKYVRSGYIVDGSFNEIRNDS 163
Qy	239	QKKIAKTGFDGALFYKGTQAKQLPVSFV-KYKGTWDFMTDAKKQGSFERRA-GDRY 296
Db	164	GFHFVKQIGIDGVVYLVGTPSKELPKGVISYKGTWDFVSNINLEREIDGPDTSKGKNV 223
Qy	297	SAMSSHEYPSSLTDDKNKPDNDYDYG-----HSSEFTVDFSKSLTGLFSNLQDH 348

Db	224	SATS-----ITETVRDHHKVGKLDGNEVGVVAHSEFAVDENKLTGSLFRNGVIN 276
Qy	349	HKGVTYTKRYDIINARIHGNFRGSATAINKONESKAKHPTSDADNRLEGGFYGPNABE 408
Db	277	RNKAQEVTKRYSIEADIAGNFRGRKAKA-----EKAGDPIFTDS-NYLEGGFYGPKAEE 329
Qy	409	LAGFLTDDNKLFGVFGAKQSEAKEFEAILDALYGTFFNKSQGTNPFTANSKKELONF 468
Db	330	MAGKFTTNKSLFAVFAKSENGETTTTTERIIIDA-----TKIDLTOFNAKELNNF 378
Qy	469	GNINKVLGSGTVIDLTQGNDF--VKTIIDKEKPAITTTNQAQGEPLTVNDKVRQV--CCSNLE 525
Db	379	GDASVLIIDGQKIDLA-GVNFNKSQTV-----INGKTMVAVACCSNLE 421
Qy	526	HLKFGSL-----SIGDSNSVFLQGTERTATYKDKKAMPVAGNAKYRGTWAGYVAGSGN 578
Db	422	YMKFGQLWQKQKQVKD-NSLFLQGTERTAT----DK-MPAGGNYKYVGTWDALV--SKG 473
Qy	579	TSKAYEAQOFADNANRAEFVDVPANKSLTGKLIPTNTSSDGKSAPDITATIDNGFSGKAN 638
Db	474	TNWIAEADNNRESGYRTEFDVNFSDKKVNGKLPDKGGVN--PVFTVDATINGNGFIGSAK 531
Qy	639	TPDIETGGLKIDSKNSRSGRVIVKDAIVIGGFYGPQANELGSGFTYKSKNDAGNODKSSA 698
Db	532	TSD--SGFALDAGSSQHGNAVFSDIKVNGGFYGTAGELGGQFHKKSD-----NGSV 581
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Job time : 33.061 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: February 23, 2005, 20:07:47 ; Search time 25.8414 Seconds
(without alignment)
2039.451 Million cell updates/sec

Title: US-09-673-133-2
Perfect score: 3690
Sequence: 1 MKHPLTTLCAVSAVLLTA.....NTDDSKASVPTKRBQBEVK 706

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Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	3690	100.0	706	4	US-09-059-584-46 Sequence 46, Appl
2	3204	86.8	702	3	US-08-613-009A-9 Sequence 9, Appl
3	3204	86.8	702	4	US-08-778-570B-11 Sequence 11, Appl
4	3204	86.8	702	2	US-09-059-584-11 Sequence 11, Appl
5	3200	86.7	702	2	US-08-867-941-25 Sequence 25, Appl
6	3200	86.7	702	3	US-09-074-658-25 Sequence 25, Appl
7	3107	84.2	682	3	US-08-613-009A-10 Sequence 10, Appl
8	3107	84.2	682	4	US-08-778-570B-12 Sequence 12, Appl
9	3107	84.2	682	4	US-09-059-584-12 Sequence 12, Appl
10	3009	81.5	713	4	US-09-059-584-49 Sequence 49, Appl
11	2365.5	64.1	709	4	US-08-778-570B-15 Sequence 15, Appl
12	2365.5	64.1	709	4	US-09-059-584-15 Sequence 15, Appl
13	2268.5	61.5	689	4	US-08-778-570B-16 Sequence 16, Appl
14	2268.5	61.5	689	4	US-09-059-584-16 Sequence 16, Appl
15	2246.5	60.9	713	4	US-09-059-584-53 Sequence 53, Appl
16	1891	51.2	707	2	US-08-949-941B-2 Sequence 51, Appl
17	1884.5	51.1	712	4	US-09-059-584-51 Sequence 51, Appl
18	1574	42.7	416	3	US-09-540-236-2388 Sequence 2388, Ap
19	863.5	23.4	662	3	US-09-405-728-3 Sequence 3, Appl
20	852	23.1	601	3	US-08-613-009A-20 Sequence 20, Appl
21	852	23.1	601	4	US-08-778-570B-26 Sequence 26, Appl
22	852	23.1	601	4	US-09-059-584-26 Sequence 26, Appl
23	844	22.9	599	3	US-08-448-194-2 Sequence 2, Appl
24	844	22.9	599	3	US-08-867-921-2 Sequence 2, Appl
25	840.5	22.8	578	3	US-08-448-194-61 Sequence 61, Appl
26	840.5	22.8	578	3	US-08-867-921-61 Sequence 61, Appl
27	833.5	22.6	598	1	US-08-487-890A-97 Sequence 97, Appl

28	833.5	22.6	598	2	US-08-478-435-97 Sequence 97, Appl
29	833.5	22.6	598	2	US-08-337-483-97 Sequence 97, Appl
30	833.5	22.6	598	2	US-08-478-373-97 Sequence 97, Appl
31	833.5	22.6	598	3	US-08-474-671-97 Sequence 97, Appl
32	833.5	22.6	598	3	US-08-483-577A-97 Sequence 97, Appl
33	833.5	22.6	598	3	US-08-897-438-97 Sequence 97, Appl
34	833.5	22.6	598	3	US-08-637-654-97 Sequence 97, Appl
35	833.5	22.6	598	3	US-08-649-518-97 Sequence 97, Appl
36	832.5	22.6	593	1	US-07-961-522-4 Sequence 4, Appl
37	832.5	22.6	593	1	US-08-217-438-4 Sequence 4, Appl
38	832.5	22.6	593	1	US-08-217-438-5 Sequence 5, Appl
39	832.5	22.6	593	1	US-08-487-890A-100 Sequence 100, App
40	832.5	22.6	593	1	US-08-321-978-4 Sequence 4, Appl
41	832.5	22.6	593	2	US-08-710-584-4 Sequence 100, App
42	832.5	22.6	593	2	US-08-478-435-100 Sequence 100, App
43	832.5	22.6	593	2	US-08-337-483-100 Sequence 100, App
44	832.5	22.6	593	2	US-08-478-373-100 Sequence 100, App
45	832.5	22.6	593	3	US-08-474-671-100 Sequence 100, App

ALIGNMENTS

RESULT 1
US-09-059-584-46 Application US/09059584
; Sequence 46
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loebmore, Sheena M.
; APPLICANT: Du, Katerian
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 706 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; US-09-059-584-46
Query Match 100.0%; Score 3690; DB 4; Length 706;
Best Local Similarity 100.0%; Pred. No. 26-243;

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Db 61 NTGTSNGTSGTANTPEPKYKDVPTDENKKBVSIGIQBPAMGYGMAKSKMLHKKQDTPLD 120
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Db 121 EKDIITLDGKQVAKGKSPPLFSLDVENKLLDGYIAKMEADKNAIGDRICKDKKSL 180
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Db 301 QAGRYYGASSKDEYNRLITDEKNKPERYNGEYGHSSFTVNFKDKLTGELFSLNLDQRK 360
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RESULT 2

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US-08-613-009A-9
; Sequence 9, Application US/08613009A
; Patent No. 6090576
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA: US/08/613, 009A
; APPLICATION NUMBER: US/08/613, 009A
; FILING DATE: 08-MAR-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-542
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-613-009A-9

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Query Match 86.8%; Score 3204; DB 3; Length 702;
Best Local Similarity 87.2%; Pred. No. 2.8e-210;
Matches 619; Conservative 39; Mismatches 40; Indels 12; Gaps 5;

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RESULT 3

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; Sequence/11, Application US/097785708
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear

US-08-778-5708-11

Query Match 86.8%; Score 3204; DB 4; Length 702;
Best Local Similarity 87.2%; Pred. No. 2.8e-210;
Matches 619; Conservative 59; Mismatches 40; Indels 12; Gaps 5;

Qy 1 MKHPLTLCVAISAVLLTACGGSGSNPPAPTPIPNASGSGNTGNTAGGDTNTANAG 60
Db 1 MKHPLTLCVAISAVLLTACGGSGSNPPAPTPIPNASGSGNTGNTAGGDTNTANAG 60
Qy 61 NTGTSNSTGANTPEPKYQDVPTDENKDEKDEKDEKDEKDEKDEKDEKDEKDEKDEK 120
Db 61 NTGTSNSTGANTPEPKYQDVPTDENKDEKDEKDEKDEKDEKDEKDEKDEKDEKDEK 120
Qy 121 EKDIITLDGKQVAKGKSPFSLDVENKLLDGYIAKWNEDKNAIGDRICKDKOKSL 180
Db 121 EKNIITLDGKQVAKGKSPFSLDVENKLLDGYIAKWNEDKNAIGDRICKDKOKSL 178
Qy 181 SKAELAKQIKEDVRKSHFQOVLSSLKNKIFHSNDGTTKATRLQYVDYGYILVNDGNY 240
Db 179 SDEELAKQIKAVRSHFQOVLSSLKNKIFHSNDGTTKATRLQYVDYGYILVNDGNY 238
Qy 241 LTVKTDLWNLGPVGVYNGYTTAKELPTQDAVKYKGHWDPMFDVAKQNRFRSEVKENL 300
Db 239 LTVKTDLWNLGPVGVYNGYTTAKELPTQDAVKYKGHWDPMFDVAKQNRFRSEVKENL 298
Qy 301 QAGRYGASSKDEYNRLTLTKEDSAPDGHSGEYGHSSSEFTVNFKEKLLTGKLFSLNQRHK 360

Db 299 QAGRYGASSKDEYNRLTLTKEDSAPDGHSGEYGHSSSEFTVNFKEKLLTGKLFSLNQRHK 358
Qy 361 GNVTKTKRYDIDANIYGNRFRGSATASDKAEASKTKHPFTSDAKNSLEGGFYGNABELA 420
Db 359 GNVTKTKRYDIDANIYGNRFRGSATASDKAEASKTKHPFTSDAKNSLEGGFYGNABELA 416
Qy 421 GKPLTNDKLVFGVGAARSKAGKTEAILDAYALGTFNKNAATFTPTTKQLDNFGNA 480
Db 417 GKPLTNDKLVFGVGAARSKAGKTEAILDAYALGTFNKNAATFTPTTKQLDNFGNA 476
Qy 481 KKLVLGSTDVLDVPTGVTKDNEFTKNKPSATNAGETLMVNDKSVKTYGYGRNFEYL 540
Db 477 KKLVLGSTDVLDVPTGVTKDNEFTKNKPSATNAGETLMVNDKSVKTYGYGRNFEYL 532
Qy 541 KFGELSVGTSNSVFLQERTATTGKAVPTKATKYLGNVWGYITGKD----SKSFPNEA 596
Db 533 KFGELSVGTSNSVFLQERTATTGKAVPTKATKYLGNVWGYITGKD----SKSFPNEA 592
Qy 597 QDVADFDIDFEKKSVMGKLTTKDQDDPVENITGDIAGNGWTGKASTTKADAGGYKIDSSS 656
Db 593 QDVADFDIDFEKKSVMGKLTTKDQDDPVENITGDIAGNGWTGKASTTKADAGGYKIDSSS 652
Qy 657 TGKSIVIKDAEVTGGFYGPANEMGGSFTHNADDSKASVVFGRKQBEVK 706
Db 653 TGKSIVIKDANVTGGFYGPANEMGGSFTHNADDSKASVVFGRKQBEVK 702

RESULT 4

US-09-059-584-11
; Sequence 11, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid

```
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-11

Query Match      86.8%; Score 3204; DB 4; Length 702;
Best Local Similarity 87.2%; Pred. No. 2.8e-210;
Matches 619; Conservative 39; Mismatches 40; Indels 12; Gaps 5;

Qy 1 MKHPLTLTLCVAISAVLLTACGGSGGNSPPAPTPIPNASGSGNTGNTGNAGGTDNTANAG 60
Db 1 MKHPLTLTLCVAISAVLLTACGGSGGNSPPAPTPIPNASGSGNTGNTGNAGGTDNTANAG 60

Qy 61 NTGTSNGTSGANTPEPKYKDVPTDENKDEVSIOEPAMGYGMAISKMHLHQDDTPLD 120
Db 61 NTGTSNGTSGANTPEPKYQDVPTKEKDKVSSIOEPAMGYGMAISKMHLNHRQDDTPLD 120

Qy 121 EKDIITLDGKKQVAKGKESPLPFLSDVENKLLDGYIAKMEADKNAIGDRIKKDKSKL 180
Db 121 EKNIITLDGKKQVAKGKESPLPFLSDVENKLLDGYIAKMNVDKNAIGDRIKKGNKE--I 178

Qy 181 SKAELAKQIKEDVRKSHFQOVLSLKNKIFHSNDGTTKATTRDLQVYDYGYYLVNDGNY 240
Db 179 SDEELAKQIKAVRKSHFQOVLSLENKIFHSNDGTTKATTRDLKIVDYGYLVNDGNY 238

Qy 241 LTVKTDLWNLGPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVKENL 300
Db 239 LTVKTDKLNWLPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVANRRNRFSEVKENS 298

Qy 301 QAGYYGASSKDEYNRLTDEKNKPERYNGEYGHSSFTVNFKDKKLTGELFSLNQRK 360
Db 299 QAGYYGASSKDEYNRLTDEKSDAPDGHSGEYGHSSFTVNFKEKKLTGKLFSLNQRHK 358

Qy 361 GNVTKRYDIDANIYGNRFRGSATSDKAEASKTKHPFTSDAKNSLEGGFYGNABELA 420
Db 359 GNVTKERYDIDANIHGNRFRGSATASNKNDTS--KHPFTSDANNRLEGGFYGPKGBEA 416

Qy 421 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFNKNNAATFTPTFKQLDNFGNA 480
Db 417 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFNNTSNATFTPTFEKQLDNFGNA 476

Qy 481 KKLVLGSTVIDLVPVTGVTQDVNFTKNKPSATNKAAGETLTMVNDKVSVKYGYGRNFEYL 540
Db 477 KKLVLGSTVIDLVPDTATK--NEFTKOKPESATNEAGETLTMVNDSEVSKT--YGNKFEYL 532

Qy 541 KFGELSVGTSNSVFLQGERATTGKAVPTKGTAKYLGNNVGYITGKD----SSKSFNEA 596
Db 533 KFGELSGGSHSVFLQGERATTGKAVPTTGTAKYLGNNVGYITGKDTGTGTGKSFDA 592

Qy 597 QDVADFDIDFEKKSVMKGLTTRKQDPVFNITGDIAGNGWTGKASTTKADAGGYKIDSSS 656
Db 593 QDVADFDIDFGNKSVMKGLITKGRQDPVFSITGQIAGNGWTGTASTTKADAGGYKIDSSS 652

Qy 657 TGSIVIKDAEVTGGFYGPANEMGGSFTHNTDSDKASVVPKTRQBEVK 706
Db 653 TGSIVIKDANVTGGFYGPANEMGGSFTHNADSDKASVVPKTRQBEVK 702

RESULT 5
US-08-867-941-25
; Sequence 25, Application US/08867941
; Patent No. 5977337
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Du, Run-Pan
; APPLICANT: Wang, Qiu-Jun
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: LACTOPERRIN RECEPTOR GENES OF MORAXELLA
; NUMBER OF SEQUENCES: 67
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
```

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; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,941
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-681 MTS:jb
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-867-941-25

Query Match      86.7%; Score 3200; DB 2; Length 702;
Best Local Similarity 87.0%; Pred. No. 5.2e-210;
Matches 618; Conservative 39; Mismatches 41; Indels 12; Gaps 5;

Qy 1 MKHPIPTLTCVAISAVLLTACGGSGGNSPPAPTPIPNASGSGNTGNTGNAGGTDNTANAG 60
Db 1 MKHPIPTLTCVAISAVLLTACGGSGGNSPPAPTPIPNASGSGNTGNTGNAGGTDNTANAG 60

Qy 61 NTGTSNGTSGANTPEPKYKDVPTDENKDEVSIOEPAMGYGMAISKMHLHQDDTPLD 120
Db 61 NTGTSNGTSGANTPEPKYQDVPTKEKDKVSSIOEPAMGYGMAISKMHLNHRQDDTPLD 120

Qy 121 EKDIITLDGKKQVAKGKESPLPFLSDVENKLLDGYIAKMEADKNAIGDRIKKDKSKL 180
Db 121 EKNIITLDGKKQVAKGKESPLPFLSDVENKLLDGYIAKMNVDKNAIGDRIKKGNKE--I 178

Qy 181 SKAELAKQIKEDVRKSHFQOVLSLKNKIFHSNDGTTKATTRDLQVYDYGYYLVNDGNY 240
Db 179 SDEELAKQIKAVRKSHFQOVLSLENKIFHSNDGTTKATTRDLKIVDYGYLVNDGNY 238

Qy 241 LTVKTDLWNLGPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVKENL 300
Db 239 LTVKTDKLNWLPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVANRRNRFSEVKENS 298

Qy 301 QAGYYGASSKDEYNRLTDEKNKPERYNGEYGHSSFTVNFKDKKLTGELFSLNQRK 360
Db 299 QAGYYGASSKDEYNRLTDEKSDAPDGHSGEYGHSSFTVNFKEKKLTGKLFSLNQRHK 358

Qy 361 GNVTKRYDIDANIYGNRFRGSATSDKAEASKTKHPFTSDAKNSLEGGFYGNABELA 420
Db 359 GNVTKERYDIDANIHGNRFRGSATASNKNDTS--KHPFTSDANNRLEGGFYGPKGBEA 416

Qy 421 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFNKNNAATFTPTFKQLDNFGNA 480
Db 417 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFNNTSNATFTPTFEKQLDNFGNA 476

Qy 481 KKLVLGSTVIDLVPVTGVTQDVNFTKNKPSATNKAAGETLTMVNDKVSVKYGYGRNFEYL 540
Db 477 KKLVLGSTVIDLVPDTATK--NEFTKOKPESATNEAGETLTMVNDSEVSKT--YGNKFEYL 532

Qy 541 KFGELSVGTSNSVFLQGERATTGKAVPTKGTAKYLGNNVGYITGKD----SSKSFNEA 596
Db 533 KFGELSGGSHSVFLQGERATTGKAVPTTGTAKYLGNNVGYITGKDTGTGTGKSFDA 592

Qy 597 QDVADFDIDFEKKSVMKGLTTRKQDPVFNITGDIAGNGWTGKASTTKADAGGYKIDSSS 656
Db 593 QDVADFDIDFGNKSVMKGLITKGRQDPVFSITGQIAGNGWTGTASTTKADAGGYKIDSSS 652
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Db 593 QDVADFDIDFCNKSXGKLTITGRQDPVFSITGQIAGNGWTGTASTTKADAGYKIDSSS 652

Qy 657 TGKSIIVKDAEVTGFGYGNANEMGGSTHTNDSDSKASVFGTKRQBEVK 706

Db 653 TGKSIADANVTGFGYGNANEMGGSTHTNADSDSKASVFGTKRQBEVK 702

RESULT 6

US-09-074-658-25

; Sequence 25, Application US/09074658

; Patent No. 6184371

; GENERAL INFORMATION:

; APPLICANT: Loosmore, Sheena M

; APPLICANT: Run-Pan Du

; APPLICANT: Quijun Wang

; APPLICANT: Yang, Yan-Ping

; APPLICANT: Klein, Michel H

; TITLE OF INVENTION: LACTOFERRIN RECEPTOR GENES OF MORAXELLA

; NUMBER OF SEQUENCES: 78

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Sim & McBurney

; STREET: 6th Floor, 330 University Avenue

; CITY: Toronto

; STATE: Ontario

; COUNTRY: Canada

; ZIP: M5G 1R7

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: Patent In Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/074,658

; FILING DATE: 08-MAY-1998

; CLASSIFICATION: 435

; ATTORNEY/AGENT INFORMATION:

; NAME: Stewart, Michael I

; REGISTRATION NUMBER: 24,973

; REFERENCE/DOCKET NUMBER: 1038-795

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (416) 595-1155

; TELEFAX: (416) 595-1163

; INFORMATION FOR SEQ ID NO: 25:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 702 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

US-09-074-658-25

Query Match 86.7%; Score 3200; DB 3; Length 702;

Best Local Similarity 87.0%; Pred. No. 5.2e-210;

Matches 618; Conservative 39; Mismatches 41; Indels 12; Gaps 5;

Qy 1 MKHPLTTLCAISAVLLTACGGGNNPPAPTIPNAGSGNTGNTGAGGTTANTAG 60

Db 1 MKHPLTTLCAISAVLLTACGGGNNPPAPTIPNAGSGNTGNTGAGGTTANTAG 60

Qy 61 NTGTGNSGTSGANTPEPKYKDVPTDENKDKVSGIQEPAMGYGMALSKMNLHKQDTPLD 120

Db 61 NTGTGNSGTSGANTPEPKYKDVPTDENKDKVSGIQEPAMGYGMALSKMNLHKQDTPLD 120

Qy 121 EKDIITLDGKQVAKGEKSPPLFSLDVENKLLDGYIAKMNADKNAIGDRIKKDNKOKSL 180

Db 121 EKNIITLDGKQVAKGEKSPPLFSLDVENKLLDGYIAKMNADKNAIGDRIKKGNKE--I 178

Qy 181 SKAELAKQIKEDVRKSHFQQVLSLKNKI FHSNDGTTKATRDLYVDYGYLVNDGNY 240

Db 179 SDEBLAKQIKEDVRKSHFQQVLSLKNKI FHSNDGTTKATRDLYVDYGYLVNDGNY 238

Qy 241 LTVKTDLWNLGPPVGGVYFNGTTTAKELPTQDAVKYKGHWDFMTDVAKQRNRFSEVKENL 300

Db 239 LTVKTDLWNLGPPVGGVYFNGTTTAKELPTQDAVKYKGHWDFMTDVANRRNRFSEVKENS 298

Qy 301 QAGYYGASSKDEYNRLITDEKKNPERYNGEYGHSSSEFTVNFKDKLITGELFSLQDSRK 360

Db 299 QAGYYGASSKDEYNRLITDEKKNPERYNGEYGHSSSEFTVNFKDKLITGELFSLQDSRK 358

Qy 361 GNVTKRYDIDANIYGNRFRGSATASDKAEASKTKHPFTSDAKNSLEGFGYGNABELA 420

Db 359 GNVTKRYDIDANIYGNRFRGSATASDKAEASKTKHPFTSDAKNSLEGFGYGNABELA 416

Qy 421 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTNKNKNNATPTPTTKQLDNFNA 480

Db 417 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTNKNKNNATPTPTTKQLDNFNA 476

Qy 481 KKLVLGSTVLDLVPYTKDNEFTKNKPSATNKAETLMVNDKVSUKTVGYGNREYL 540

Db 477 KKLVLGSTVLDLVPYTKDNEFTKNKPSATNKAETLMVNDKVSUKTVGYGNREYL 532

Qy 541 KFGELSVGTNSVFLQERTATTGKAVPTKGTAKYLGNNVGYITGKD---SSKSFNEA 596

Db 533 KFGELSVGTNSVFLQERTATTGKAVPTKGTAKYLGNNVGYITGKD---SSKSFNEA 592

Qy 597 QDVADFDIDFEKSVKGLITTKGRQDPVFSITGQIAGNGWTGTASTTKADAGYKIDSSS 656

Db 593 QDVADFDIDFEKSVKGLITTKGRQDPVFSITGQIAGNGWTGTASTTKADAGYKIDSSS 652

Qy 657 TGKSIIVKDAEVTGFGYGNANEMGGSTHTNDSDSKASVFGTKRQBEVK 706

Db 653 TGKSIADANVTGFGYGNANEMGGSTHTNADSDSKASVFGTKRQBEVK 702

RESULT 7

US-08-613-009A-10

; Sequence 10, Application US/08613009A

; Patent No. 6090576

; GENERAL INFORMATION:

; APPLICANT: Myers, Lisa E

; APPLICANT: Schryvers, Anthony B

; APPLICANT: Harkness, Robin E

; APPLICANT: Loosmore, Sheena M

; APPLICANT: Du, Run-Pan

; APPLICANT: Yang, Yan-Ping

; APPLICANT: Klein, Michel H

; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella

; NUMBER OF SEQUENCES: 31

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Sim & McBurney

; STREET: 6th Floor, 330 University Avenue

; CITY: Toronto

; STATE: Ontario

; COUNTRY: Canada

; ZIP: M5G 1R7

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: Patent In Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/613,009A

; FILING DATE: 08-MAR-1996

; CLASSIFICATION: 435

; ATTORNEY/AGENT INFORMATION:

; NAME: Stewart, Michael I

; REGISTRATION NUMBER: 24973

; REFERENCE/DOCKET NUMBER: 1038-542

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (416) 595-1155

; TELEFAX: (416) 595-1163

; INFORMATION FOR SEQ ID NO: 10:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 682 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

Db 593 TKGRQDPVFSITGQIAGNGWGTATSTTKADAGGYKIDSSSTGKSIIVKIDANVTGGFYGN 652

Qy 677 ANMGGSFTHNTDDSKASWFGTKRQEVK 706
||||| ||||| : |||

Db 653 ANMGGSFTHNADDSKASWFGTKRQEVK 682

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RESULT 9
US-09-059-584-12
; Sequence 12, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella

```

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/ NUMBER OF SEQUENCES: 60
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Sim & McBurney
/ STREET: 6th Floor, 330 University Avenue
/ CITY: Toronto
/ STATE: Ontario
/ COUNTRY: Canada
/ ZIP: M5G 1R7
/
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: PatentIn Release #1.0, Version #1.30
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/09/059,584
/

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FILING DATE: 14-APR-1998
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/778,570
 FILING DATE: 03-JAN-1997
 CLASSIFICATION:
 ATTORNEY/AGENT INFORMATION:
 NAME: Stewart, Michael I
 REGISTRATION NUMBER: 24973
 REFERENCE/DOCKET NUMBER: 1038-794
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (416) 595-1155
 TELEFAX: (416) 595-1163
 INFORMATION FOR SEQ ID NO: 12:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 682 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 US-09-059-584-12

Query Match	84.2%	Score 3107;	DB 4;	Length 682;
Best Local Similarity	86.8%;	Pred. No. 1.1e-203;		
Matches 599;	Conservative	39;	Mismatches 40;	Indels 12;
				Gaps 5;

21	CGSGSGSNPPATPTIPNAGSGNTGNTGNAGTDTNAGNTGGTNSGTGSANTPEPKYK	80	QY
1	CGSGSGSNPPATPTIPNAGSGNTGNTGNAGTDTNAGNTGGTNSGTGSANTPEPKYK	60	Db
81	DYPTDENKKDEYSGTQEPAMGYGMALSKWNLHKQDPTLDEKDIITLDGKKQVAKGKSP	14	QY
61	DYPTETKEKDKVSSIQEPAMGYGMALSKINLNRQDPTLDEKNIITLDGKKQVAKGKSP	12	Db
141	LPFSLDVENKLDGVIYAKNNEADKNAIGDRIKKNKSKSLKAEALAKQIKEDVRKSHFQ	20	QY
121	LPFSLDVENKLDGVIYAKNNAADKNAIGDRIKKNKSKSLKAEALAKQIKEDVRKSHFQ	17	Db
201	QVLSLKKNKIKFHSNDGTTKATTRDLQYVDYGYLLVNDGNLYLTVKTDLEWNLGPVGGVFN	26	QY

179	QVLSSLENKI FHSNDGTTKATTRDLKVVYDYGYILANDGNLYTVTKDKLWNLPVGGVFN	238
261	GTTTAKELPTQDAVKYKGHWDFMTDVAKORNRFSEVKENLOAGRYVGASSKDEYNRLTLD	320
239	GTTTAKELPTQDAVKYKGHWDFMTDVANRNRFSEVKENSQAGWYVGASSKDEYNRLJTK	298
321	EKNKPERYGEYGHSSSEFTVNFQDKLGTBELFSNLQDSRKGNVTKTKRYDIDANYGNR	380
299	EDSAPDCHGSEYGHSSSEFTVNFKEKLTGKLFSLNQDRHKGNVTKTKRYDIDANIGHNR	358
381	RGSATASDKAEASKTUPFTTSDAKNSLEGPGYGNABELACKFLTNDNKLFGVFGAKRES	440
359	RGSATASNNKNDTS--KHPTTSDANNRLEGGYPGKGBELACKFLTNDNKLFGVFGAKRES	416
441	KAGEKTEAILDVALGTFNKNNAFTTPTFKQLDNFGNAKKVLGTSVIDLVPVTGVTDK	500
417	KAGEKTEAILDVALGTFNNTSNATTTPTFKQLDNFGNAKKVLGTSVIDLVPDTATK--	475
501	VNEFTKNKPD SATNKA GETLWMDKVSKTVGYGRNFEYLFKGBELSVGTSNSVFLQBERT	560
476	-NEFTKDKPSSATNEAGETLWMDNDEVSVKT--YGNKFEYLFKGBELS IGGSHSVFLQBERT	532
561	ATTGEKAVPTKTA KYLGNNVGIITGKD----SSKSPNEAQDVADFDIDFKKSVKGKLT	616
533	ATTGEKAVPTTGA KYLGNNVGIITGKDTGTGTGKSFDTAQDVADFDIDFGNKSVSGLI	592
617	TKDRQDPVFNITGD IAGNGWGTGKASTTKADAGGYKIDSSSTGKSIIVIKDAEVTGGFYGN	676
593	TKGRQDPVFSITQ IAGNGWGTGTASTTKADAGGYKIDSSSTGKSIIVIKDANVTGGFYGN	652
677	ANEMGGSFTHTDDSKASVVFGTKRQBEVK	706
653	ANEMGGSFTHNADD SKASVVFGTKRQBEVK	682

RESULT 10
US-09-059-584-49
; Sequence 49, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Lu, Run-Pan
; APPLICANT: Doosmore, Sheena M.
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973

```

; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; US-09-059-584-49

```

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Query Match      81.5%; Score 3009; DB 4; Length 713;
Best Local Similarity 82.7%; Pred. No. 5.6e-197;
Matches 591; Conservative 47; Mismatches 61; Indels 16; Gaps 8;

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Qy 1 MKHPLTTLCAISAVLLTACGGSGNPPAPTPIPNASGSGNTGNTGNAGTDTANAG 60
Db 1 MKHPLTTLCAISAVLLTACGGSGNPPAPTPIPNASGSGNTGNTGNAGTDTANAG 60
Qy 61 NTGTSNTSGTSANTPEPKYKDVPTDENKDKVSGIQBPAMGYGMALSKMNLHKQDDTPLD 120
Db 61 NTGTSNTSGTSANTPEPKYKDVPTDENKDKVSGIQBPAMGYGMALSKMNLHKQDDTPLD 120
Qy 121 EKOIITLDGKQVAKGKSPPLFSLDVENKLLDGYIAKMNADKVAIGDRICKDN-KDKS 179
Db 121 AKNIITLDGKQVADNQKSPPLFSLDVENKLLDGYIAKMNADKVAIGERIKRENEQVK 180
Qy 180 LSKAELAKQIKEDYRKSHFQOVLSSLKMKIHFHSDNGTTKATTRDLOVDYGYLVNDGN 239
Db 181 ISDELAKKIKENVRKSPFQOVLSSIRAKTFHSDNKTTRATTRDLKYVDYGYLVNDAN 240
Qy 240 YLTVKTD--ELMNLGPVGGVYNGTAKELPTQDAVKYKGHDFMTDVAQRNRFSEVK 297
Db 241 YLTVKTDKPKLWNSGPGVYNGTAKELPTQDAVKYKGHDFMTDVAQRNRFSEVK 300
Qy 298 ENLAQRYYGASSKDEYNRLTDEKNKPERVNGYHSSEPTVNFKDKLTGELFSLQD 357
Db 301 EYQAGWMYGASSKDEYNRLTAKADAAPDNYSGYHSSEPTVNFKEKLTGELFSLQD 360
Qy 358 SRKGNVTKRYDIDANLYGNRFRGSATASPKASKTGHPPTSDAKNSLEGGYGNAE 417
Db 361 SHKQVTKRYDIDKADHGNRFRGSATATDKASDKSKHPPTSHAKDKLEGGYGPKE 420
Qy 418 ELACKFLTNMNLFGVFGAKRESKAGEKTEAILDAYALGTPKNKAT--TFTPTKKOLD 475
Db 421 ELACKFLTDNKLFGVFGAKQEGNV-EKTEAILDAYALGTFNKGCTTNPAFTANSKELD 479
Qy 476 NFGNAKKLVLGSTVIDLVPTGVTKDVNEFTKQKPDPSATNKAGETLMVNDKVSVKTYGYR 535
Db 480 NFGNAKKLVLGSTVIDLVPTDATKDVNEF-KEKPKSATNKAGETLMVNDVSVKTV--YKG 536
Qy 536 NFEYLKFGELSVGTNSVFLQERTATTGKAVPTGKATKYLGNWVGYITKDS-- 590
Db 537 NFEYLKFGELSVGSHSVFLQERTATTGKAVPTTGKAKYLGWVGYITGADSKGSTD 596
Qy 591 -KSFNEAQDVADFDIDPEKSVKGLTKTRQDQDPVFNITGDIAGNWTGKASTTKADAGG 649
Db 597 GKGTDAKDADFIDIDPEKSVNKLTKTRQDQDPVFNITGDIAGNWTGKASTAEANAGG 656
Qy 650 YKIDSSSTGKSIVIKDAEVTGGFYPNANMGGSFTHTT-DDSKASVVFGRQ 703
Db 657 YKIDSSSTGKSIVIKDAVVTGGFYPNATEMGGSFTHNSGNDGKGVSVFGRQ 711

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RESULT 11

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US-08-778-570B-15
; Sequence 15, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.

```

```

; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 709 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-778-570B-15

```

```

Query Match      64.1%; Score 2365.5; DB 4; Length 709;
Best Local Similarity 67.0%; Pred. No. 4.3e-153;
Matches 495; Conservative 51; Mismatches 130; Indels 63; Gaps 15;

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Qy 1 MKHPLTTLCAISAVLLTACGG--SGSNPPAPTPIPNASGSGNTGNTGNAGT----DN 55
Db 1 MKHPLTTLCAISAVLLTACGGSSGGFNPPAPTPIPNAGNSGNAGNAGGTGGANS 60
Qy 56 TANAGNTGNTSGTSANTPEPKYKDVPTDENKDKVSGIQBPAMGYGMALSKMN--LH 112
Db 61 AGNAGGTGGANSAGSASTPEPKYKDVPTDENKDKVSGIQBPAMGYGMALSKMNWIP 120
Qy 113 KQDTPIDEXDIITLDGKQVAKGKSPPLFSLDV-ENKLLDGYIAKMNADKVAIGDRI 171
Db 121 QESHAKINTNDVVKLE-----GDLKHNPFDSIWQNIKNKSKEVQTVYNQEKQNI 173
Qy 172 KKONK-----DKSLK-----AELAKQIKEDVRSKSHFQOVLSSLKQKIFHS 213
Db 174 KRENKQRPDKLDDVALQAVIEKVLDDRLTELAKPIYE-----KN-INYS 217
Qy 214 NDGTTKATTRLOQVDYGYLVNDGNVLTVKTDLNLNLPVGGVYNGTGTAKELPTODA 273
Db 218 HDQNKARTKDLKVRSGY--IYRSGYSNIIIPKIAKTGDFGALFYGTQAKQLPVSQ- 274
Qy 274 VKYKGHWDFMTDVAQRNRFSEVKENIQAGRYYGASSKDEYNRLTDEKNKPERYNGEY 333
Db 275 VKYKGHWDFMTDAKKGQSFSGTSQRLAGDRYSAMSVHEYPSLLTDEKNKPDYNGEY 334
Qy 334 HSSEFTVNFKDKLTGELFSLNLDQSRKGNVTKRYDIDANLYGNRFRGSATASDKAEAS 393
Db 335 HSSEFTVDFSKSLKSELNSIQDHGKSVNKTTRYDIDANLYGNRFRGSATASDTTEAS 394
Qy 394 KTKHPPTSDAKNSLEGGFYGNABEELAGFLTNDKLFVGFAGKRESKAGKTEAILDAY 453
Db 395 KSKHPPTSDAKNSLEGGFYGNABEELAGFLTNDKLFVGFAGKRESKAGKTEAILDAY 454
Qy 454 ALGTFNKNAT--TFTPTTKQLDNFNGNAKKLVLGSTVIDLVPTGVTKDVNEFTKNK 511

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Db 455 ALGTFNKGTTNPAFTANSKELDNFGNAKLVLGSTVIDLVPTGATKDVNEF-KEKPKS 513
 Qy 512 ATNKAETLMVNDKVSVKTYGYGRNFYLYKFGELSVGTSNVFLQGETARTTGKAVPTK 571
 Db 514 ATNKAETLMVNDKVSVKTYGYGRNFYLYKFGELSVGTSNVFLQGETARTTGKAVPTK 570
 Qy 572 GTAKYLGWVGYITGKD-----SSKSFNEAQVADFDIDFEKSVKGLTTRKQDPPVNI 627
 Db 571 GTAKYLGWVGYITGKD-----SSKSFNEAQVADFDIDFEKSVKGLTTRKQDPPVNI 630
 Qy 628 TGDIAAGNGWTGKASTTKADAGYKIDSSSTGKSIIVKDAEVTGGFYGNANEMGGSFTHN 687
 Db 631 TGOIAGNGWTGKASTTKADAGYKIDSSSTGKSIIVKDAEVTGGFYGNANEMGGSFTHD 690
 Qy 688 TDDSKASVVFGTGKQEEVK 706
 Db 691 TDDSKASVVFGTGKQEEVK 709

RESULT 12

US-09-059-584-15
 ; Sequence 15, Application US/09059584
 ; Patent No. 6440701

GENERAL INFORMATION:

; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Harkness, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 60
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue
 ; CITY: Toronto
 ; STATE: Ontario
 ; COUNTRY: Canada
 ; ZIP: M5G 1R7

COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/059,584
 ; FILING DATE: 14-APR-1998

CLASSIFICATION:

; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/778,570
 ; FILING DATE: 03-JAN-1997

CLASSIFICATION:

; ATTORNEY/AGENT INFORMATION:
 ; NAME: Stewart, Michael I
 ; REGISTRATION NUMBER: 24973
 ; REFERENCE/DOCKET NUMBER: 1038-794
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (416) 595-1155
 ; TELEFAX: (416) 595-1163
 ; INFORMATION FOR SEQ ID NO: 15:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 709 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear

US-09-059-584-15

Query Match 64.1%; Score 2365.5; DB 4; Length 709;
 Best Local Similarity 67.0%; Pred. No. 4.3e-153;
 Matches 495; Conservative 51; Mismatches 130; Indels 63; Gaps 15;

Qy 1 MKHPLTLTLCVAISAVLLTACGG-SGGSNPPAPPTIPNAGSGNTGNTGAGGT----DN 55
 Db 1 MKHPLTLTLCVAISAVLLTACGGSSGGFNPASTPIPNAGSGNAGNAGGTTGGANGS 60
 Qy 56 TANAGNTGGNSGTSGSANTPEPKYKDVPTDENKKDEVSIGIQEPAMGIGMALSKNN---LH 112
 Db 61 AGNAGGTGGANGSAGSASTPEPKYKDVPTDENKAEVSGIQEPAMGIGVGLKLRNWI PQE 120
 Qy 113 KQDTPDDEKDIITLDGKKQVAKGEKSPLPFSLDV-ENKLLDGYIAKNNADKNAIGRI 171
 Db 121 QEEHAKINTNDVVKLE-----GDLKHNPPDINSIQNIKNKSEVQTVYNOEKQNIEDQI 173
 Qy 172 KKDNNK---DKSLSK-----AELAKQIKEDVRKSHFEQVQLVSSLKNNKIPHS 213
 Db 174 KRENQRPDKKLDVVALQAYIEKVLDDRLTELAKPIYE-----KN-INYS 217
 Qy 214 NDTGTTKATTRDLQVYDGYLVNDGNLYTVKTDLMNLPVGGVYFNGTITAKELPTQDA 273
 Db 218 HDKQNKARTDRLKYVRSGY--IYRSGYSNIIIPKIIAKTGPDGALFYQGTQTAQLPVSQ- 274
 Qy 274 VKYKGHWDFMTDVAKQORNFSEVKENLOAGRIYVQASSKDEYNRLLTDEKNKPERYNGBYG 333
 Db 275 VKYKGTWDFMTDAKKQGSFSGFTSQRLAGDRYSAMSYHEYPSSLTDEKNKPDNYNGBYG 334
 Qy 334 HSSEFTVNFKDKLTGELFSLNODSRKGNVTTKRYDIDANIYGNRFRGSATASDKAEAS 393
 Db 335 HSSEFTVDFSKSLKGBELSNIOQHGKSVNKTTRYDIDANIYGNRFRGSATASDTTEAS 394
 Qy 394 KTKHPFTSDAKNSLEGGFYGNABELAGKFLTNDNKLFGVFGAKRESKAGEKTEAILDAY 453
 Db 395 KSKHPFTSDAKNSLEGGFYGNABELAGKFLTNDNKLFGVFGAKRESKAGEKTEAILDAY 454
 Qy 454 ALGTFNKNAT--TFTPTTKQLDNFGNAKLVLGSTVIDLVPTGATKDVNEF-KEKPKS 511
 Db 455 ALGTFNKGTTNPAFTANSKELDNFGNAKLVLGSTVIDLVPTGATKDVNEF-KEKPKS 513
 Qy 512 ATNKAETLMVNDKVSVKTYGYGRNFYLYKFGELSVGTSNVFLQGETARTTGKAVPTK 571
 Db 514 ATNKAETLMVNDKVSVKTYGYGRNFYLYKFGELSVGTSNVFLQGETARTTGKAVPTK 570
 Qy 572 GTAKYLGWVGYITGKD-----SSKSFNEAQVADFDIDFEKSVKGLTTRKQDPPVNI 627
 Db 571 GTAKYLGWVGYITGKDTGTSTGKSFNEAQVADFDIDFEKSVKGLTTRKQDPPVNI 630
 Qy 628 TGDIAAGNGWTGKASTTKADAGYKIDSSSTGKSIIVKDAEVTGGFYGNANEMGGSFTHN 687
 Db 631 TGOIAGNGWTGKASTTKADAGYKIDSSSTGKSIIVKDAEVTGGFYGNANEMGGSFTHD 690
 Qy 688 TDDSKASVVFGTGKQEEVK 706
 Db 691 TDDSKASVVFGTGKQEEVK 709

RESULT 13

US-08-778-570B-16
 ; Sequence 16, Application US/08778570B
 ; Patent No. 6437096

GENERAL INFORMATION:

; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Harkness, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 43
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue
 ; CITY: Toronto
 ; STATE: Ontario
 ; COUNTRY: Canada

ZIP: MSG 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/778,570B
FILING DATE: 03-JAN-1997
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24973
REFERENCE/DOCKET NUMBER: 1038-664
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 689 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-778-570B-16

Query Match 61.5%; Score 2268.5; DB 4; Length 689;
Best Local Similarity 66.1%; Pred. No. 1.7e-146;
Matches 475; Conservative 51; Mismatches 130; Indels 63; Gaps 15;
Qy 21 CGG-SGGSNPAPPTIPNAGSGNGTGTGNAGGT-----DNTANAGTGTGTSANTP 75
Db 1 CGSSGGFNPPASTPIPNAGSNAGNAGGTGGANGAGGTGGANGAGSASTP 60
Qy 76 EPKYKDVPTDENKDESVGIQEPAMGYGMAISKN---LHKQDPTLDEKDIITLDGKKQ 132
Db 61 EPKYKDVPTDENKAEVGIQEPAMGYGVELKLRNWIPOQEEHAKINTNDVVKLE---- 116
Qy 133 VAKGEKSPFSLDV-ENKLLDGYIAKMNADKNAIGRIKKONK---DKSLK----- 182
Db 117 ---GDLKHNPFDSIWQNIKNKSEVQTVYNQEKQIEDQIKRENKQRPDKLDDVALQAY 173
Qy 183 -----RELAKQIKEDYKSHFEFOVLSSLNKIFHNSNDGTTKATTTDLQVVDYGY 233
Db 174 IEKVLDDRLTELAKPIYE-----KN-INYSHDKONKARTDLKYVRSGY- 216
Qy 21 CGG-SGGSNPAPPTIPNAGSGNGTGTGNAGGT-----DNTANAGTGTGTSANTP 75
Db 1 CGSSGGFNPPASTPIPNAGSNAGNAGGTGGANGAGGTGGANGAGSASTP 60
Qy 76 EPKYKDVPTDENKDESVGIQEPAMGYGMAISKN---LHKQDPTLDEKDIITLDGKKQ 132
Db 61 EPKYKDVPTDENKAEVGIQEPAMGYGVELKLRNWIPOQEEHAKINTNDVVKLE---- 116
Qy 133 VAKGEKSPFSLDV-ENKLLDGYIAKMNADKNAIGRIKKONK---DKSLK----- 182
Db 117 ---GDLKHNPFDSIWQNIKNKSEVQTVYNQEKQIEDQIKRENKQRPDKLDDVALQAY 173
Qy 183 -----RELAKQIKEDYKSHFEFOVLSSLNKIFHNSNDGTTKATTTDLQVVDYGY 233
Db 174 IEKVLDDRLTELAKPIYE-----KN-INYSHDKONKARTDLKYVRSGY- 216

Qy 648 GGYKIDSSSTGKSIVIKDAEVTGGFYGPANANEMGGSTHTNTDDSKASVWFGTKRQEVK 706
Db 631 GGYKIDSSSTGKSIVIKDAEVTGGFYGPANANEMGGSTHTNTDDSKASVWFGTKRQEVK 689
RESULT 14
US-09-059-584-16
Sequence 16, Application US/09059584
Patent No. 6440701
GENERAL INFORMATION:
APPLICANT: Myers, Lisa E
APPLICANT: Schryvers, Anthony B
APPLICANT: Harkness, Robin E
APPLICANT: Loosmore, Sheena M.
APPLICANT: Du, Run-Pan
APPLICANT: Yang, Yan-Ping
APPLICANT: Klein, Michel H
TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/059,584
FILING DATE: 14-APR-1998
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/778,570
FILING DATE: 03-JAN-1997
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24973
REFERENCE/DOCKET NUMBER: 1038-794
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 689 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-09-059-584-16

Query Match 61.5%; Score 2268.5; DB 4; Length 689;
Best Local Similarity 66.1%; Pred. No. 1.7e-146;
Matches 475; Conservative 51; Mismatches 130; Indels 63; Gaps 15;
Qy 21 CGG-SGGSNPAPPTIPNAGSGNGTGTGNAGGT-----DNTANAGTGTGTSANTP 75
Db 1 CGSSGGFNPPASTPIPNAGSNAGNAGGTGGANGAGGTGGANGAGSASTP 60
Qy 76 EPKYKDVPTDENKDESVGIQEPAMGYGMAISKN---LHKQDPTLDEKDIITLDGKKQ 132
Db 61 EPKYKDVPTDENKAEVGIQEPAMGYGVELKLRNWIPOQEEHAKINTNDVVKLE---- 116
Qy 133 VAKGEKSPFSLDV-ENKLLDGYIAKMNADKNAIGRIKKONK---DKSLK----- 182
Db 117 ---GDLKHNPFDSIWQNIKNKSEVQTVYNQEKQIEDQIKRENKQRPDKLDDVALQAY 173
Qy 183 -----RELAKQIKEDYKSHFEFOVLSSLNKIFHNSNDGTTKATTTDLQVVDYGY 233
Db 174 IEKVLDDRLTELAKPIYE-----KN-INYSHDKONKARTDLKYVRSGY- 216

QY 234 LVNDGNLYLTKTDELWNLGPVGGVYNGTITAKELPTQDAVKYKGHWDFMTDVAQKORNF 293
 Db 217 -IYRSGYNNIIPKKIATKFGDGFYQGTQAKQLFVSQ-VKYKGTWDFMTDAKKGOSFS 274
 QY 294 SEVKENLAQRYGASSKDEYNRLITDEKNKPERYNGEYGHSSSEFTVNFKDKLITGELFS 353
 Db 275 SFGTSQRLAGDRYSAMSVEYPSLITDEKNKPDNYNGEYGHSSSEFTVDFSKSLKGEISS 334
 QY 354 NLODRKGNVTKRYDYDANIYGNRFRGSATASDKAASKTKGPPFTSDAKNSLEGGFY 413
 Db 335 NIQDHKGSVNKTKRYDIDANIYGNRFRGSATASDTTEASKSKHPFTSDAKNSLEGGFY 394
 QY 414 PNAELACKELTNDNKLFGVCAKESKAGKTEAILDAYALGTGNKNAT--FTPTPK 471
 Db 395 PNAELACKELTNDNKLFGVCAKESKAGKTEAILDAYALGTGNKPGTNPAPTANSK 454
 QY 472 KQDNFNGNAKLVLGSTVIDLPTGVTKDVNEFTKNKPDSTNKRAGETLMVNDKVSVKTY 531
 Db 455 KELDNGNAKLVLGSTVIDLPTGVTKDVNEF-KEKPSATNKRAGETLMVNDKVSVKTY 513
 QY 532 GYGRNFEYLKFGELSVGTSNVSFLQGTATTTGKAVPTKGTAKYLGNNWGYITGKD--- 588
 Db 514 GYGRNFEYLKFGELSIGSHSVFLQGTATA---EKAVPTGTAKYLGNNWGYITGKDTGT 570
 QY 589 -SSKSFNEAODVADPDIDFEKKSVMKGLTTKXDRQDPVFNITGDIAGNGWTGKATTKADA 647
 Db 571 STGKSFNQAQDIADPDIDFERKSVKGLTTQGRQDPVFNITGQIAGNGWTGKATTKANV 630
 QY 648 GYKIDSSSTGKSIKDAEVTGFGYGNANEMGGSFTHNTDDSKASVVFQTKRQBEVK 706
 Db 631 GYKIDSSSTGKSIKDAEVTGFGYGNANEMGGSFTHNTDDSKASVVFQTKRQBEVK 689

RESULT 15

US-09-059-584-53
 ; Sequence 53, Application US/09059584
 ; Patent No. 6440701
 ; GENERAL INFORMATION:
 ; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Harkness, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 60
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue
 ; CITY: Toronto
 ; STATE: Ontario
 ; COUNTRY: Canada
 ; ZIP: M5G 1R7
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/059,584
 ; FILING DATE: 14-APR-1998
 ; CLASSIFICATION:
 ; PRIOR APPLICATION NUMBER: US 08/778,570
 ; FILING DATE: 03-JAN-1997
 ; CLASSIFICATION:
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Stewart, Michael I
 ; REGISTRATION NUMBER: 24973
 ; REFERENCE/DOCKET NUMBER: 1038-794
 ; TELECOMMUNICATION INFORMATION:

TELEPHONE: (416) 595-1155
 TELEFAX: (416) 595-1163
 ; INFORMATION FOR SEQ ID NO: 53:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 713 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 US-09-059-584-53

Query Match 60.9%; Score 2246.5; DB 4; Length 713;
 Best Local Similarity 63.5%; Pred. No. 5,7e-145;
 Matches 472; Conservative 76; Mismatches 128; Indels 67; Gaps 19;
 QY 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPPIPNASGSGNTGNTGAGG---TON-- 55
 Db 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPPIPNASGAGNAGGTGNTGTTGTTNVG 60
 QY 56 -----TANAGNTGCTSGTSANTPEPKYQDVPTDKNEKEQVSIQBPAMGYMELK 107
 Db 61 NAGANSCTGNAGNSGNSANTPEPKYQDVPTDKNEKEQVSIQBPAMGYMELK 120
 QY 108 KMLNH-----KQDTPLEDKDIITLDGKKQVAKGEKSPFPFSLDVENKLLDGYIAK 158
 Db 121 LRNAHPLNPNKNKEAEKIALDQDLVAVE-----GDLTNIPF-----DKNLEIYKK 168
 QY 159 MN-----EADKNAIGDRIKKONKDKSLKAEIAKQIKEDVRKS--HEFQQVLSLKNKIF 211
 Db 169 SSEVSVFEAQKQGIENNTRLTHKD--LSSEFQEAKEVKEALDNALQTQFAQ--EKYKELIE 224
 QY 212 HSDNGTTKATRLQVYDYGVLVNDGNLYLTKT---DELWNL-GPVGGVYNGTITAK 266
 Db 225 NAHDKSDARNRDLLEVYVKSFGF-----NYLSGYTATDHDKKTNYRGYGYALYKGSETAK 278
 QY 267 ELPTQDAVKYKGHWDFMTDVAQKORNFSEYKENLQAGRYGASSKDEYNRLITDEKNKPE 326
 Db 279 ELP-QTSAKYKGYWDFMTD-ATLDNKYTDLPGLARQTQWRSYSTDEYATLITDKNNKPS 336
 QY 327 RYNGEYGHSSSEFTVNFKDKLITGELFSNLQDSRKNVTKRYDIDANIYGNRFRGSATA 386
 Db 337 DYNGAYGHSSSEFTVNFADKKIKGLISNQLSGTA--VTAKERYKIEADIHGNRRFRGSATA 394
 QY 387 SDKAEASKTKHPFTSDAKNSLEGGFYGNPAEELAGKFLTNDNKLFGVFGAKRESKAGEKT 446
 Db 395 SDKAEASKTKHPFTSDATNKLGGFYGNPAEELAGKFLTNDNKLFGVFGAKRDKV--EKT 452
 QY 447 EAILDAYALGTGNK--NNATFTPTKQLDNFNGNAKLVLGSTVIDLVPVTGVTKD--VNE 503
 Db 453 EAILDAYALGTGNK--NNATFTPTKQLDNFNGNAKLVLGSTVINILVSTDATKNFTKK 512
 QY 504 FTNKPDSATNKAETLMVNDKVSVKTYGYGRNFEYLKFGELSVGTSNVSFLQGTATT 563
 Db 513 FTKDKPTSATNKAETLMVNDKVSVKTYGYGRNFEYLKFGELSVGDSHVSFLQGTATT 570
 QY 564 GEKAVPTGTAKYLGNNWGYITGKDSKSFNEAODVADPDIDFEKKSVMKGLTTKDRQDP 623
 Db 571 GEKAVPTGTAKYLGNNWGYITGAGTGSFNEAODIADPDIDFERKSVKGLTTTQGTDP 630
 QY 624 VFNITGDIAGNGWTGKATTKADAGYKIDSSSTGKSIKDAEVTGFGYGNANEMGGS 683
 Db 631 VFNITGDIAGNGWTGKATTKADAGYKIDSSSTGKSIKDAEVTGFGYGNANEMGGS 690
 QY 684 FTHNTDDSKASVVFQTKRQBEVK 706
 Db 691 FTHNTDDSKASVVFQTKRQBEVK 713

RESULT 16

US-08-949-941B-2
 ; Sequence 2, Application US/08949941B
 ; Patent No. 5972657
 ; GENERAL INFORMATION:
 ; APPLICANT: Murphy, Timothy F.

```

; APPLICANT: Sethi, Sanjay
; TITLE OF INVENTION: Gene Encoding Outer Membrane
; TITLE OF INVENTION: Protein B1 of Moraxella catarrhalis
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hodgson, Russ, Andrews, Woods & Goodyear
; ADDRESSEE: LLP
; STREET: 1800 One M&T Plaza
; CITY: Buffalo
; STATE: New York
; COUNTRY: United States
; ZIP: 14203-2391
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 3.5 inch, 1.44 Kb storage
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: Windows 95
; SOFTWARE: Wordperfect
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/949,941B
; FILING DATE: 14 October 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Nelson, M. Bud
; REGISTRATION NUMBER: 35,300
; REFERENCE/DOCKET NUMBER: 11520.00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (716) 856-4000
; TELEFAX: (716) 849-0349
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 707 residues
; TYPE: amino acid
; TOPOLOGY: linear
; DESCRIPTION: protein
; HYPOTHEICAL: yes
; US-08-949-941B-2

Query Match 51.1%; Score 1891; DB 2; Length 707;
Best Local Similarity 56.6%; Pred. No. 9.9e-121;
Matches 413; Conservative 84; Mismatches 185; Indels 48; Gaps 20;

Qy 1 MKHPLTLTLCVAISAVLLTACGGSGGNPPAPTIPINASGSGNTGNTGNAGGTTNTANAG 60
Db 1 MKHPLTLTLCVAISAVLLTACGGSGGNPPAPTIPINASGSGNTGNTGNAGGTTNTANAG 60
Qy 61 NTGTNSTGSGANTPEPKYKDVPTDENKDVSGIQEPAMCYGNALSKMNLHKQDTPLD 120
Db 61 NTGTSSGTSGASTSEPKYQDVPTTPNKEQVSSIQEPAMGYAMELKLRNAHPNPKET 120
Qy 121 EKDIITLDGKKQVA-KGEKSPLPFSLDVENKLLDG--YIAQWNEADKNAIGDRIKKDKND 177
Db 121 EKR-IALDQKDLVAEGNLTNIPFDKNLIEYLKKSPEVSKFNE-QKGGIENNTLTHKD 178
Qy 178 KSLKAEALAKQIKEDVRKSHFQQVLSLKNKI FHSNDGTTKATRLQVYDYGYIYVND 237
Db 179 --LSSEQKEAKVEALDNAQE-----KYBELIENAHDKKSDARNRDLKYVKSGF----- 225
Qy 238 GNYLTVTX---DELNL-GPVGVFYNGITTAKEPLTQDAVKYKGHWDFMTDAVKQRN 292
Db 226 -NYSUGVTATDHDKKTNYRGYGYALYKGSETAKELP-QTSAKYKGYWDFMTD-ATLDNK 282
Qy 293 FSEYKENLQAGRYGYGASSCKEYRLLTDEKNKPKRYNGEYGHSSSEFTVNFKDKKLTGELF 352
Db 283 YTDLPGARQOTQWRSVSTDEYATLLTDKNKPSDYNGAYGHSSEFDVNFADKVTGKLI 342
Qy 353 SNLQDSKGNVTKYRVDIDANIYGNRFRGSATASDKAEASKTKHPPTSDAKNSLEGFY 412
Db 343 SN-QLSGK-TVTAERYKIEADIHGNRFRGSIASEKTDSEKSKHPPTSDAKDLREGFY 400
Qy 413 GPNAEELAGKFLTNDKILFGVFGAKRSKAGEKTEAILDAYALGTENKKNAT--TFTPT 470
Db 401 GPKGEELAGKFLTDNDKILFGVFGAKRSKAGEKTEAILDAYALGTENKSGTTPAFNANS 460

; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 51:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 712 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-09-059-584-51

Query Match 51.1%; Score 1894.5; DB 4; Length 712;
Best Local Similarity 55.8%; Pred. No. 2.8e-120;
Matches 412; Conservative 88; Mismatches 178; Indels 61; Gaps 22;
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Query Match 42.7%; Score 1574; DB 4; Length 416;

US-09-540-236-2388
US-09-540-236-2388
Sequence 2388, Application US/09540236
Patent No. 6673910
GENERAL INFORMATION:
APPLICANT: Gary L. Breton et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO MORAXELLA CATARRHALIS
TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2005-001
CURRENT APPLICATION NUMBER: US/09/540,236
CURRENT FILING DATE: 2000-04-04
NUMBER OF SEQ ID NOS: 3840
SEQ ID NO 2388
LENGTH: 416
TYPE: PRT
ORGANISM: M.catarrhalis
US-09-540-236-2388

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Best Local Similarity   81.5%; Pred. No. 2e-99;
Matches 313; Conservative      24; Mismatches 37; Indels 10; Gaps 6

QY 325 PERVNGYGHSSSFTVNFKDKKLTGELFSLNQLDSRKGNVTKRYDIDANITYGNRRFGSA 384
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 35 PSNYNGAYGHSSSEFDVNFANKKYTGKLISN-QLSGK-TVTAKERYKIEADIGHNRFRGSA 92
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 385 TASDKABASKTGHPFTSDAKNSLEGPGYPGNAEBLAGKFLTNDNKLFQVFCAKRESKAGE 444
    :|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 93 IASEKTDSESKSPFTSDAKDLKEGGFYGPKESELAGKFLTDDNKLFQVFCAKOEGBA-K 151
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 445 KTEAILDAYALGFNFKNKNAATFTPTKKQLDNFNCAKKLVLGSTVIDLVPVTGVTKDVNEF 504
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 152 PTEAILDAYALGTFNTDAATFTFTPKQLDNFNCAKKLVLGSTVIDLVPDTATKDVNEF 211
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 505 TKNKPSDATNKAGETLMVNDKVSVKTYGYGRNFLEYLKFGELSVGTSNSVFLQGERTATTG 564
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 212 TKNKPSDATNKAGETLMVNDKVSVKT--YGKNFYLELKFGELSVGTSNSVFLQERTVTTG 269
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 565 EKAVPTGTGTAKYLGNWVGYITGKD----SSKSFNDAQVDADFIDFEKKSVKGLTKTKDR 620
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 270 EKAVPTTGTAKYLGWVGYIAGTKDTGAGSSKGFTDAKDVAADFIDFEKKTVNGKLTTOGR 329
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 621 QDPVFNITGDIAGNGWTGKASTTKADAGGYKID-SSSTGKSIIVIKDAEVTGGFYCPNPANE 679
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 330 QDPVFNITGQTAGNGWTGTASTAKANAGGYNIIDSSSTSNKSIVIKDAEVTGGFYCPNPANE 389
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 680 MGGSFTHNTDDSKASVVFGTKROE 703
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 390 MGGSFTHNADDKRVSVVFGTKKQE 413
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

RESULT 19
US-09-405-728-3
; Sequence 3, Application US/09405728
; Patent No. 6391316
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Rioux, Clement
; APPLICANT: Schryvers, Anthony B.
; TITLE OF INVENTION: CLONING AND EXPRESSION OF HAEMOPHILUS SOMNUS
; FILE REFERENCE: 9000-0049.20
; CURRENT APPLICATION NUMBER: US/09/405,728
; EARLIER FILING DATE: 1999-09-24
; EARLIER FILING DATE: 1999-03-10
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 662
; TYPE: PRP
; ORGANISM: Haemophilus somnus
US-09-405-728-3
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Query Match	23.4%	Score	863.5	DB	3	Length	662
Best Local Similarity	35.0%	Pred. No.	1.1e-50				
Matches	262	Conservative	77	Mismatches	250	Indels	159
Gaps	30						

Qy	13	ISAVLLTAC--GSGG--SNPPAPTPIPNAGSGNGTGNAGGTDNTANAGNTGCTNSGT	69
Db	12	LSVALLSACSGKGGLDDVEHTP--PSSGSS-----	43
Qy	70	GSANTPPKVKDPTDENKKDVEGSIQEPAMGYGMALSKMLHKQDDPLDEKDIITLDG	129
Db	44	-----RPTQDVTGQRQOEIVVEINSALPGYATEIPRRNISPMPTTGTKESNARVAIT	97
Qy	130	KQVAKGKESPL--PFLSDVENKLLDGYIAQWNEADKNVIGDRIFKDKNKKDSLSKAEI	187
Db	98	AQQA-----PLSMPP-----NSIKEDFI-----KELIAENTKKNAGR-----	131
Qy	188	QIKEDVRKSHFEQVLSLKNKIPIHSNDGTTTKATRDLDQYVDYGYLLVNDGNYLTV----	243

APPLICANT: Du, Run-Pan
APPLICANT: Yang, Van-Ping
APPLICANT: Klein, Michael H
TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
NUMBER OF SEQUENCES: 43
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/778,570B
FILING DATE: 03-JAN-1997
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24973
REFERENCE/DOCKET NUMBER: 1038-664
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 26:
SEQUENCE CHARACTERISTICS:
LENGTH: 601 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-778-570B-26

Query Match 23.1%; Score 852; DB 4; Length 601;
Best Local Similarity 34.6%; Pred. No. 5.7e-50;
Matches 234; Conservative 100; Mismatches 212; Indels 130; Gaps 27;

Qy 63 GGTSGTGSANT-----PEPKYKDVPTDENKKDEVSIGIQEPAMGYGMALSKNHL----- 112
Db 24 GGSFDLDSVETQDMHSPKYEDEKSPQESQDVSENSGAAYGFAVKLPFRNAHPNPKY 83

Qy 113 KOQDTPLEKDIITLDGKKQVAKGSKPLPSLDVKNKLLDGYIAKNEADKNAIGRIK 172
Db 84 KEKKPLGMD-----WKQLQGE--PNSFS-----E 108

Qy 173 KDNKDSLSKAEALAKIQUEDVRKSHFPOQVLSLKNKIFPHSNDGTTKATRDQLQVVDGY 232
Db 109 RDELEKRGSSBELIESKWEDGQ-----SRVV-----GYTNFT-----YVRSGY 146

Qy 233 YLVNDGNVLTVKTDRLNWLPGVGVYNGTTTAKELPTODAVKYKHWDFTDVAKORNR 292
Db 147 VYLKNN-IDIK-NNIVLFGPDGILYKKEPSKELPS-EKITYKGTWYVID-AMEQR 202

Qy 293 FSEVKENLQAGRYYGASSKDEYNRLITDEKNKPERYNG--BYGHSSEFTVNFQDKLGTGE 350
Db 203 F-EGLSAAGDGKSGALSALBEGVL-----RQAEASSGHTDFGMTSEPEVDFDKTIKT 257

Qy 351 LFSN---LQSRKGNVTTKYRIDIDANTYGNRFRGSATASDAEASKTKHPTSDAKNSL 407
Db 258 LYRNNRITQNNSENKQIKTTRYTIQATLHNRFRFGKALADKG-ATNGSHPFIDS-DSL 315

Qy 408 EGGFYGNPAEELAGFLNDNKLQVFCARSK-----AGEKTEALIDAYALGTFNKN 461
Db 316 EGGFYGNPAEELAGFLNDNKLQVFCARSK-----AGEKTEALIDAYALGTFNKN 369

Qy 462 NATTPPTFKQLDNFGNAKLVLGSTVIDLVPTGTVDKVNFTKNKPDSDATNKAQETLM 521
Db 370 ---TGEFFKEQIDSGVDGKLLVDGVLSLIP-----SEGNKAAQHE 410

Qy 522 VNDKVSVKTYGYGRNFEYKFGELSVGTSNSVFLQGETATTTGKAVTKGTAKYLGWV 581

Db 411 I-EQNGVKATVCCSNLDYMSFGKLSKENKODMFLQGVTPVS-DVAARTEANAKYRGTY 468
Qy 582 GYIT-----GKDSKSFNEAQDVADFDIDPKKSVKGLTKTKDQDPVFNITGDIAGNW 636
Db 469 GYIANGTSWSGEASNQFTEGGNRAEFVDVFTSKKISGTLTAKDRTSPAFTITAMIKONGF 528

Qy 637 TGKASTTKADAGGYKIDSSSTGKSIIVIK-DAEVTGGFVGPNANEMGGSFTH-----NTDD 690
Db 529 SGVAKTGE---NGFALDPQNTGNSHYTHIEATVSGGYGKNAIEMGGSFSPFGNAPEGKQ 585

Qy 691 SKASVWFQTKRQEEVK 706
Db 586 EKASVWFQAKRQQLVQ 601

RESULT 22
US-09-059-584-26
; Sequence 26, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Van-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 601 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-26

Query Match 23.1%; Score 852; DB 4; Length 601;
Best Local Similarity 34.6%; Pred. No. 5.7e-50;
Matches 234; Conservative 100; Mismatches 212; Indels 130; Gaps 27;

Qy 63 GGTSGTGSANT-----PEPKYKDVPTDENKKDEVSIGIQEPAMGYGMALSKNHL----- 112
Db 24 GGSFDLDSVETQDMHSPKYEDEKSPQESQDVSENSGAAYGFAVKLPFRNAHPNPKY 83

Qy 113 KOQDTPLEKDIITLDGKKQVAKGSKPLPSLDVKNKLLDGYIAKNEADKNAIGRIK 172
Db 84 KEKKPLGMD-----WKQLQGE--PNSFS-----E 108

Qy 173 KDNKDSLSKAEALAKIQUEDVRKSHFPOQVLSLKNKIFPHSNDGTTKATRDQLQVVDGY 232
Db 109 RDELEKRGSSBELIESKWEDGQ-----SRVV-----GYTNFT-----YVRSGY 146

Qy 233 YLVNDGNVLTVKTDRLNWLPGVGVYNGTTTAKELPTODAVKYKHWDFTDVAKORNR 292
Db 147 VYLKNN-IDIK-NNIVLFGPDGILYKKEPSKELPS-EKITYKGTWYVID-AMEQR 202

Qy 293 FSEVKENLQAGRYYGASSKDEYNRLITDEKNKPERYNG--BYGHSSEFTVNFQDKLGTGE 350
Db 203 F-EGLSAAGDGKSGALSALBEGVL-----RQAEASSGHTDFGMTSEPEVDFDKTIKT 257

Qy 351 LFSN---LQSRKGNVTTKYRIDIDANTYGNRFRGSATASDAEASKTKHPTSDAKNSL 407
Db 258 LYRNNRITQNNSENKQIKTTRYTIQATLHNRFRFGKALADKG-ATNGSHPFIDS-DSL 315

Qy 408 EGGFYGNPAEELAGFLNDNKLQVFCARSK-----AGEKTEALIDAYALGTFNKN 461
Db 316 EGGFYGNPAEELAGFLNDNKLQVFCARSK-----AGEKTEALIDAYALGTFNKN 369

Qy 462 NATTPPTFKQLDNFGNAKLVLGSTVIDLVPTGTVDKVNFTKNKPDSDATNKAQETLM 521
Db 370 ---TGEFFKEQIDSGVDGKLLVDGVLSLIP-----SEGNKAAQHE 410

Qy 522 VNDKVSVKTYGYGRNFEYKFGELSVGTSNSVFLQGETATTTGKAVTKGTAKYLGWV 581

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Qy 113 KQDPTLDEKDIITLDGKQVAKGKSPFSLDENKLLDGYIAKNKNAIGDRIK 172
Db 84 KEKHKPLGMD-----WKKLQGE--PNSFS-----E 108
Qy 173 KDNKDSLSKALAKQIKEDVRKSHBFOQVLSLKNKIFHSNDGTTKATTRDLOQYVDY 232
Db 109 RDELEKRGSSSELIESKWEDQ-----SRV-----GYTNFT-----YVRSY 146
Qy 233 YLVNDGNYLTVDLWNLGPGVGVYNGTTAKELPTQDAVKYKGHWDFMTDVAQKOR 292
Db 147 VYLNKN-IDIK-NNIVLFGPDGVLYYKGKPELS-EXITYKGTWYVD-AMEKQ 202
Qy 293 FSEVKENLQAGRYGKASSKDEYNRLTDEKNKPERYNG--EYHSSFTVNFKDKLTGE 350
Db 203 F-EGLSAAGDKSGALSALBEGVL-----RQAEASSGHTDFGWTSEFVDFSDTKTGT 257
Qy 351 LFSN---LQDSRKGNVTKTKYDIDANIYGNRFRGSATASDKABASKTKHPFTSDAKNSL 407
Db 258 LYRNRITQNNSENKQIKTRYTIQATLHGNRFGKALADKG-ATNGSHPPFISDS-DSL 315
Qy 408 EGGFYGNABELACKFLTNKDLFGVCAKRESK-----AGEKTEAILDAYALGTENK 461
Db 316 EGGFYGNABELACKFLTNKDLFGVCAKRESK-----AGEKTEAILDAYALGTENK 461
Qy 462 NATTFPTTKQLDNFGNAKVLVGTVIDLVPVGTVDVNEFTKNKPDGSAATKAGETLM 521
Db 370 ---TGEFKKEQIDSGVGVKLLVDGVELSLP-----SEGKAAAFQHE 410
Qy 522 VNDKVSUKTYGYGNFEYLKFGELSVGTSNVSFLQERTATTGKAVPTKATKYLGNV 581
Db 411 I-EQGVKATVCCSNLDYMSFGKLSKENKDMFLQGVRTVPS-DVAARTANAKYRGTW 468
Qy 582 GYIT-----GKDSKSFNEAQDADFDIDFEKSVKGLTKTKRQDPVFNITGDIAGNW 636
Db 469 GYIANGTSWGEASNQTEGGRNABFDVDFSTKISGTLTAKDRTSPAFTIAMIKN 528
Qy 637 TGKASTTKADAGYKIDSSSTGKIVIK-DAEVTGGFYGNANEMGGSFTH-----NTDD 690
Db 529 SGVAKTGE---NGFALDPQNTGNHYTHIEATVSGGYGNKAIEMGGSFPGNAPGKQ 585
Qy 691 SKASVFGTKRQEVK 706
Db 586 EKASVFGKARQLVQ 601

RESULT 23
US-08-448-194-2
; Sequence 2, Application US/08448194
; Patent No. 6028049
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THIESEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENT'S CODING FOR THE TRANSFERRIN
; TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS:
; ADDRESS: Burns, Doane, Swecker & Mathis
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/448,194
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; FILING DATE: 23-MAY-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION NUMBER: US 08/361,469
; APPLICATION NUMBER: 22-DEC-1994
; FILING DATE: 22-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm M.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 599 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-448-194-2

Query Match 22.9%; Score 844; DB 3; Length 599;
Best Local Similarity 34.7%; Pred. No. 2e-49;
Matches 234; Conservative 98; Mismatches 214; Indels 128; Gaps 27;

Qy 63 GGTNSGTGSANT-----PEPKYKDVPTDENKDEVSQIQBPAMGYGMALSKMLH----- 112
Db 24 GGSFPLDSVETVQDMHSEKPKYDEKSPESQDQVSENSGAAYGFAVKLPRNAHFNPKY 83
Qy 113 KQDPTLDEKDIITLDGKQVAKGKSPFSLDENKLLDGYIAKNKNAIGDRIK 172
Db 84 KEKHKPLGMD-----WKKLQGE--PNSFS-----E 108
Qy 173 KDNKDSLSKALAKQIKEDVRKSHBFOQVLSLKNKIFHSNDGTTKATTRDLOQYVDY 232
Db 109 RDELEKRGSSSELIESKWEDQ-----SRV-----GYTNFT-----YVRSY 146
Qy 233 YLVNDGNYLTVDLWNLGPGVGVYNGTTAKELPTQDAVKYKGHWDFMTDVAQKOR 292
Db 147 VYLNKN-IDIK-NNIVLFGPDGVLYYKGKPELS-EXITYKGTWYVD-AMEKQ 202
Qy 293 FSEVKENLQAGRYGKASSKDEYNRLTDEKNKPERYNG--EYHSSFTVNFKDKLTGE 350
Db 203 F-EGLSAAGDKSGALSALBEGVL-----RQAEASSGHTDFGWTSEFVDFSDTKTGT 257
Qy 351 LFSN---LQDSRKGNVTKTKYDIDANIYGNRFRGSATASDKABASKTKHPFTSDAKNSL 407
Db 258 LYRNRITQNNSENKQIKTRYTIQATLHGNRFGKALADKG-ATNGSHPPFISDS-DSL 315
Qy 408 EGGFYGNABELACKFLTNKDLFGVCAKRESK-----AGEKTEAILDAYALGTENK 461
Db 316 EGGFYGNABELACKFLTNKDLFGVCAKRESK-----AGEKTEAILDAYALGTENK 461
Qy 462 NATTFPTTKQLDNFGNAKVLVGTVIDLVPVGTVDVNEFTKNKPDGSAATKAGETLM 521
Db 370 ---TGEFKKEQIDSGVGVKLLVDGVELSLP-----SEGKAAAFQHE 410
Qy 522 VNDKVSUKTYGYGNFEYLKFGELSVGTSNVSFLQERTATTGKAVPTKATKYLGNV 581
Db 411 I-EQGVKATVCCSNLDYMSFGKLSKENKDMFLQGVRTVPS-DVAARTANAKYRGTW 468
Qy 582 GYI-----TGKDSKSFNEAQDADFDIDFEKSVKGLTKTKRQDPVFNITGDIAGNW 638
Db 469 GYIANGTSWGEASNQTEGGRNABFDVDFSTKISGTLTAKDRTSPAFTIAMIKN 528
Qy 639 KASTTKADAGYKIDSSSTGKIVIK-DAEVTGGFYGNANEMGGSFTH-----NTDDSK 692
Db 529 VAKTGE---NGFALDPQNTGNHYTHIEATVSGGYGNKAIEMGGSFPGNAPGKQ 585
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QY 693 ASVVGTKRQBEVK 706
 Db 586 ASVVGAKRQQLVQ 599

RESULT 24

US-08-867-921-2
 ; Sequence 2, Application US/08867921
 ; Patent No. 6326350
 ; GENERAL INFORMATION:
 ; APPLICANT: JACOBS, Eric
 ; APPLICANT: LEGRAIN, Michele
 ; APPLICANT: MAZARIN, Veronique
 ; APPLICANT: BOUCHON-THEISEN, Bernadette
 ; APPLICANT: SCHRYVERS, Anthony B.
 ; APPLICANT: BLOCH, Marie-Aline
 ; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
 ; TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
 ; NUMBER OF SEQUENCES: 62
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
 ; STREET: P.O. Box 1404
 ; CITY: Alexandria
 ; STATE: VA
 ; COUNTRY: USA
 ; ZIP: 22313-1404
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/867,921
 ; FILING DATE: 03-JUN-1997
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/445,472
 ; FILING DATE: 22-MAY-1995
 ; APPLICATION NUMBER: US 08/361,469
 ; FILING DATE: 22-DEC-1994
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/078,053
 ; FILING DATE: 18-JUN-1993
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: FR 92 07493
 ; FILING DATE: 19-JUN-1992
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: McGowan, Malcolm K.
 ; REGISTRATION NUMBER: 39,300
 ; REFERENCE/DOCKET NUMBER: 016100-004
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (703) 836-6620
 ; TELEFAX: (703) 836-2021
 ; INFORMATION FOR SEQ ID NO: 2:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 599 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; US-08-867-921-2

Query Match 22.9%; Score 844; DB 3; Length 599;
 Best Local Similarity 34.7%; Pred No. 2e-49;
 Matches 234; Conservative 98; Mismatches 214; Indels 128; Gaps 27;
 QY 63 GGTNSGTGSANT-----PEPKYKDVPTDENKKDEYSGIQEPAMGYGMALSKMNLH----- 112
 Db 24 GGGSPDLDSVETQDMHSPKPYDEKSPQSQDDVSNSGAAYGPAVKLP RNAHFNPKY 83
 QY 113 KQDTPLEKDIITLDGKKQVAKGEKSPLPSPSLDENKLLDGYIAKQNEADKNAIGRIK 172

Db 84 KEKHPGSGMD-----WKKLQRCG--PNSFS-----E 108
 QY 173 KNDKSLSKAELAKQIKEDVRKSHFQQVLSSLNKNI FHSNDGTTKATTRDLQVYVGY 232
 Db 109 RDELEKKRGSSELIESKWEDGQ-----SRVV-----GYTNFT-----YVRSGY 146
 QY 233 YLVNDGNYLTVKTDDELWNILGPVGVYNGTTTAKELPTQDAVKYKGHWDFTDVAKORNR 292
 Db 147 VYLNKNIN-IDIK-NNI VLFPGDPGYLYYKGEKPSKELPS-EXITYKGTWYDVT-AMEKOR 202
 QY 293 FSEVKENLQAGRYYGASSKDEYNRLLTDEKNKPRYNG--EYHSSSEFTVNFKOKKLAGE 350
 Db 203 F-EGLGSAAGDKSGALSALLEGVL-----RQAASSGHTDFGMTSEFEVDFSDTKTKGT 257
 QY 351 LFSN---LQDSRKGNVTTKRYIDANIYGNRFRGSATASDKABASKTKHPTSDAKNSL 407
 Db 258 LYRNNRITQNNSENKQIKTRYTTIQTALHGNRFGKALADKG-ATNGSHPFISDS-DSL 315
 QY 408 EGGFYGNABEELACKELTNDNKLFGVCAKRESK-----AGEKTEALDADALGTFPNK 461
 Db 316 EGGFYGPKEELAGKFLSNDNKNVAAVFGAKQKDKGGENAAGPATETVIDAYRI----- 369
 QY 462 NATTFPTPKKOLDNFGNAKKLVLGSTVIDLVPTGVT KDVNEFTKNKPD SATNKAGETLM 521
 Db 370 ---TGEFFKEQIDSGDVKLLVDGVLSLLP-----SEGNKAAFOHE 410
 QY 522 VNDKSVKTYGYGRNFBYLFKFGELSVGTSNSVFLQERTATTGKAVPTKGTAKYLGWV 581
 Db 411 I-EQGVKATVCCSNLDYMSFGKLSKENKDDMLQGVRTPV-S-DVAARTEANAKYRGTWY 468
 QY 582 GYI---TKDSSKSFNEAQDVADFDIDPEKSVKGLTKTKDRQDPVFNITGDIAGNGWTG 638
 Db 469 GYIANGTSWSGEASNQEGNRAEFDVDFSTKIKISGTLTAKDRTSPAFTITAMIKDNGFSG 528
 QY 639 KASTTKADAGGYKIDSSSTGKSIVIK-DAEVTGGFYGNANEMGGSFTH-----NTDDSK 692
 Db 529 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGGYFKNAIEMGGSFSPGNAPEGKQEK 585
 QY 693 ASVVGTKRQBEVK 706
 Db 586 ASVVGAKRQQLVQ 599

RESULT 25
 US-08-448-194-61
 ; Sequence 61, Application US/08448194
 ; Patent No. 6028049
 ; GENERAL INFORMATION:
 ; APPLICANT: JACOBS, Eric
 ; APPLICANT: LEGRAIN, Michele
 ; APPLICANT: MAZARIN, Veronique
 ; APPLICANT: BOUCHON-THEISEN, Bernadette
 ; APPLICANT: SCHRYVERS, Anthony B.
 ; APPLICANT: BLOCH, Marie-Aline
 ; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
 ; TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
 ; NUMBER OF SEQUENCES: 62
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Burns, Doane, Swecker & Mathis
 ; STREET: P.O. Box 1404
 ; CITY: Alexandria
 ; STATE: Virginia
 ; COUNTRY: United States
 ; ZIP: 22313-1404
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/448,194
 ; FILING DATE: 23-MAY-1995

CLASSIFICATION: 435
PRIOR APPLICATION DATA: US 08/361,469
FILING DATE: 22-DEC-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/078,053
FILING DATE: 18-JUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 92 07493
FILING DATE: 19-JUN-1992
ATTORNEY/AGENT INFORMATION:
NAME: McGowan, Malcolm M.
REGISTRATION NUMBER: 39,300
REFERENCE/DOCKET NUMBER: 016100-005
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 61:
SEQUENCE CHARACTERISTICS:
LENGTH: 578 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
US-08-448-194-61

Query Match 22.8%; Score 840.5; DB 3; Length 578;
Best Local Similarity 34.6%; Pred. No. 3.3e-49;
Matches 233; Conservative 98; Mismatches 214; Indels 129; Gaps 27;

Qy 63 GGTNSGTGSANT-----PEPKYKDVPTDENKKDRVSGIQEPAMGYGMALSKMNLH----- 112
Db 4 GGSFDLDSVETQDMHSPKPYEKEQPSQDQVSENSGAAYGFAVKLPRNAHFNPKY 63

Qy 113 KQDTPLDKDIITLDGKKQVAKSEKPLPSLDVENKLLDGYAKNNEADKNAIGRIK 172
Db 64 KEKHPGLGMD-----WKKLQGE--PNSFS-----E 88

Qy 173 KDNKDKLSKAEALAKIKEDYRKSHFQOVLSSLKNKIFHSNDGTGTTKATTRDLOYVDGY 232
Db 89 RDELEKKRGSSELLESKWEDQ-----SRVV-----GYTFT-----YVRSGY 126

Qy 233 YLVNDGNYLVTKTDELWNLPGVGVYNGTTTAKELPTQDAVKYKGHWDMFTDVAQQRN 292
Db 127 VYLNKN-NIDK-NNIVLFGPDGYLYKGPSPKELPS-EKITTYKGTWYVTD-AMEKQR 182

Qy 293 PSEVKENLOAGRYGASCKDEYNRLITDEKNKPERYNG--EYCHSSSEFTYNFKDKLTGE 350
Db 183 FE--GGSAAGDXGKLSALSEGLV-----RQAEASGHTDFGMTSEFVDFDOKTNGT 236

Qy 351 LFSN---LQDSRKGNTKTRDYDIDANIYGNRPRGSATASDAEASKTKHPFTSDAKNSL 407
Db 237 LYRNRITQNSSEKQIKTTRYTQATLHGNRFGKALAAADKG-ATNGSHPFIDS-DSL 294

Qy 408 EGGYGPNAEELAGKFLTNDKLFVFGAKRESK-----AGEKTEAILDAYALGTFTKN 461
Db 295 EGGYGPKEGELAGKFLSNDKNVAAVFGAKQKDKGNAAGPATETVIDAYRI----- 348

Qy 462 NATFTPTTKQLDNFGNAKVLGSGTVIDLVPTGVTKVQNVNFTKNPDSATNKAGETLM 521
Db 349 ---TGEFPKEQIDSGFDGVKLLVDGVELSLP-----SEGKAAAFQHE 389

Qy 522 VNDKSVKTYGYGNFYLKFGELSVGTSNVSFLOGERTATTGBKAVPTKGTAKVLGNWV 581
Db 390 I-EQNGVKATVCCNLDYMSFGKUSKENKDNMFLQGVTPVS-DVAARTEANAKYRGTWY 447

Qy 582 GYI---TKDSSSKFNEAQDVADEIDPEKKSVKGLTTRDQDPVFNITGDIAGNWGTG 638
Db 448 GYIANGTWSGEASNQEGNRAEFDVDFSTKKISGTLTAKDRTSPATITAMIKDNGFSG 507

Qy 639 KASTTKADAGYKIDSSSTGHSIVIK-DAEVTGFGYPGNANEMGSGFTH-----NTDDSK 692
Db 508 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGGFYKNAIEMGGSFSPGNAPGKQEK 564

Qy 693 ASVVFGTKRQSEYK 706
Db 565 ASVVFGAKRQQLVQ 578

RESULT 26
US-08-867-921-61
Sequence 61, Application US/08867921
Patent No. 6326350
GENERAL INFORMATION:
APPLICANT: JACOBS, Eric
APPLICANT: LEGRAIN, Michele
APPLICANT: MAZARIN, Veronique
APPLICANT: BOUCHON-THEISEN, Bernadette
APPLICANT: SCHRYVERS, Anthony B.
APPLICANT: BLOCH, Marie-Aline
TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
NUMBER OF SEQUENCES: 62
CORRESPONDENCE ADDRESS:
ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
STREET: P.O. Box 1404
CITY: Alexandria
STATE: VA
COUNTRY: USA
ZIP: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/867,921
FILING DATE: 03-JUN-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/445,472
FILING DATE: 22-MAY-1995
APPLICATION NUMBER: US 08/361,469
FILING DATE: 22-DEC-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/078,053
FILING DATE: 18-JUN-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 92 07493
FILING DATE: 19-JUN-1992
ATTORNEY/AGENT INFORMATION:
NAME: McGowan, Malcolm K.
REGISTRATION NUMBER: 39,300
REFERENCE/DOCKET NUMBER: 016100-004
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 61:
SEQUENCE CHARACTERISTICS:
LENGTH: 578 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
US-08-867-921-61

Query Match 22.8%; Score 840.5; DB 3; Length 578;
Best Local Similarity 34.6%; Pred. No. 3.3e-49;
Matches 233; Conservative 98; Mismatches 214; Indels 129; Gaps 27;

Qy 63 GGTNSGTGSANT-----PEPKYKDVPTDENKKDRVSGIQEPAMGYGMALSKMNLH----- 112
Db 4 GGSFDLDSVETQDMHSPKPYEKEQPSQDQVSENSGAAYGFAVKLPRNAHFNPKY 63

Qy	113	KOODPTLDEKOIITLDGKQVAKGEKSPLPSLDVENKNLLDGYIAKNVEADKNAIGDRIK	172
Db	64	KEKHPLGSGMD-----WKKLORGE--PNSFS-----E	88
Qy	173	KONKDKSLSKAELAKOIKEDYRKSHFEOOVLSLKNNKI FHSNDGTTKATTRDLQYYVDYG	232
Db	89	RUELEKKRGSSSELISKWEDGO-----SRVV-----GYNFT-----YVRSGY	126
Qy	233	YLVDNGNYLTVKTDBELMNLGPVGGVFYNGTTTAKELPTQDAVKYKGHWDPMTDVAKORN	292
Db	127	VYLVKNKN-IDIK-NNIVLPFGPDVLYYKGEKPSKELPS-EKITYKGTWTDVVTD-AAMEKOR	182
Qy	293	PSEVENLOAGRYGYGASSKODEYNRLLTDEKNKPERYNG--EYGHSSSEFTVNFKDKKLTCGE	350
Db	183	FR--GGSAAGBKSGALLBEGVL-----RNQAASSGTHDFGMTSEFEVDFSDKTIKGT	236
Qy	351	LFSN----LQDSRKGNVTTKTYRIDIDANIYGNRFRGSATASDKABEASTKHPFTSDAKNSL	407
Db	237	LYRNRRIITQNSENKOIKITRYTIOATLHGHRFKGKALAADKG-ATNGSHPPFLSDS-DSL	294
Qy	408	EGGFYGPNAEBELAGFLPNDNKLCFVPGAKRESK-----AGEKTEAILDAYALTGFNNKX	461
Db	295	EGGFYGPKEEELAGFLSNDNKVAAVFGAKOKDKDGENAAGPATETVIDAYRI-----	348
Qy	462	NATTFPTPKCOLDNFGNAKLLVLGSTVIDILVPTGVTKVYNEFTKNKPDSATNKAGETLM	521
Db	349	-----TGEEFKKEQLISFDGVKKLLVDGVELSLP-----SEGNAAFQJHE	389
Qy	522	VNDKSVSKTYGYGRNFPEYLKFCELSVGTGTSNVSFLQGERTATTGEEKAVPTKGTAKYLGNNV	581
Db	390	I-EONGVKATVCCSNLDYMSFGKLSKENKDMMFLQGVRTFPVS-DVAARTEANAKYRGTWY	447
Qy	582	GVI-----TGKDSKSKSFNEAQDVANDPDI DFEKSKSVGKLLTTKDRQDPVNIITGDITAGNWGTG	638
Db	448	GVIANGTWSGSRASNQEGGNRAEFDDVFSTKKISGTULTAKDRTPSPATITAMIKDNGFGSG	507
Qy	639	KASTTKADAGGYKIDSSTGKSI VIK-DAEVYTGCFYGPNAENMGGSFTH-----NTDDSK	692
Db	508	VAKTGE---NGFALPDQNTGNSHYTHIEATVYSGFGYKGNALEMGGSFPCPNAPGKQEK	564
Qy	693	ASVVFCTKRQBKV 706	
Db	565	ASVVFCAKROOLVO 578	

RESULT 27

US-08-487-890A-97
; Sequence 97, Application US/08487890A
; Patent No. 5708149
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 Unversity Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:

[illegible]

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;
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-410 MIS:jb
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-337-483-97

Query Match          22.6%; Score 833.5; DB 2; Length 598;
Best Local Similarity 34.7%; Pred. No. 1e-48;
Matches 234; Conservative 98; Mismatches 213; Indels 129; Gaps 28;

Qy 63 GGTSGTGSANT-----PEPKYKDVPTDENKKDEVSIGIQEPAMGYGMALSKNHL----- 112
Db 24 GGGFDLDSVETQDMHSPKPYDEKSPQSQDVSENSGAAYGFAVKLPRNAHFNPYK 83

Qy 113 KQDPTLDEKDIITLDGKKQVAKGKSPPLPSLDVSNKLLDGYIAKMEADKNAIGRIK 172
Db 84 KEKHPLGSM-----WKQLQGE--PNSFS-----E 108

Qy 173 KDNKDKSLSKAELAKQIKEDVYKSHFQOVLSSLKKNKIFHNSDGTTKATTRDLQVVDYGY 232
Db 109 RDELEKKRGSSELIESKWEDGQ-----SRVV-----GYTNFT-----YVRSGY 146

Qy 233 YLVNDGNVLTVKTDLNLGLPVGGVFYNGTTTAKELPTODAVKYKGHWDFMTDVAKQNR 292
Db 147 VYLNKN--IDIK--NNIVLFGPDGYLYYKGPSPKELPS--EKITYGTWYDVT--AMEKOR 202

Qy 293 FSEVKENLQAGRYYGASSKDEYNRLLTDEKKNPERYNG--EYGHSEFTVNFKDKLTGE 350
Db 203 F-EGLSAAGDKSGALSALLEGVL---RQAEASSGHTDFGMTSEPEVDFSDTKTKGT 257

Qy 351 LPSN---LQSRKGNVTTKRYDIDANITYGNRFRGSATASDKAEASKTKHPFTSDAKNSL 407
Db 258 LYRNRIITONNSENKQIKTRTYTQATLHGNRFRGKALADKG--ATNGSHPFISDS--DSL 315

Qy 408 EGGFYGPAEELAGFLNDNKLFGVFGAKRESK-----AGEKTEALDVAALGTGPN 461
Db 316 EGGFYGPGEEELAGFLNDNKNVAAFVAKQKQKDGNAAGPATE--VIDAYRI----- 368

Qy 462 NATPTPTKQLDNFGNAKLLVLGSTVIDLPTGTVDVNAFTKNKPDPSATNKAGETLM 521
Db 369 ---TGEPEKQIDSGFDGVKKLLVDGVLSLLP-----SEGKAAAFQHE 409

Qy 522 VNDKVSUTYGYGRNFEYLYKFGELSVGTSNSVFLQERTATTGKAVPTKGTAKYLGWV 581
Db 410 I-EQNGVKATVCCSNLDYMSFGKLSKENKNDMFLQGVTPVS--DVAARTEANAKYRGTWY 467

Qy 582 GVI---TKDSSKSPNEAQDVADFDIDPEKKSVKGLTKTDKQDPVFNITGDIAGNWTG 638
Db 468 GYIANGTSWSEASNOEGNRAEFDVDFSTKISGTLTAKORTSPAFITAMIKONGFSG 527

Qy 639 KASTTKADAGGYKIDSSSTGKSIVIK--DAEVTGGFYGPNANEMGGSFTH-----NTDSDK 692
Db 528 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGGFGYGNKNALEMGGSFPGNAPGKQEK 584

Qy 693 ASVFGTKRQBEVK 706
Db 585 ASVFGAKRQQLVQ 598

RESULT 30
US-08-478-373-97
; Sequence 97, Application US/08478373
; Patent No. 5922841
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
```

```
;
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Mordin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/478,373
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-463 MIS:vg
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-478-373-97
```

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Query Match          22.6%; Score 833.5; DB 2; Length 598;
Best Local Similarity 34.7%; Pred. No. 1e-48;
Matches 234; Conservative 98; Mismatches 213; Indels 129; Gaps 28;

Qy 63 GGTSGTGSANT-----PEPKYKDVPTDENKKDEVSIGIQEPAMGYGMALSKNHL----- 112
Db 24 GGGFDLDSVETQDMHSPKPYDEKSPQSQDVSENSGAAYGFAVKLPRNAHFNPYK 83

Qy 113 KQDPTLDEKDIITLDGKKQVAKGKSPPLPSLDVSNKLLDGYIAKMEADKNAIGRIK 172
Db 84 KEKHPLGSM-----WKQLQGE--PNSFS-----E 108

Qy 173 KDNKDKSLSKAELAKQIKEDVYKSHFQOVLSSLKKNKIFHNSDGTTKATTRDLQVVDYGY 232
Db 109 RDELEKKRGSSELIESKWEDGQ-----SRVV-----GYTNFT-----YVRSGY 146

Qy 233 YLVNDGNVLTVKTDLNLGLPVGGVFYNGTTTAKELPTODAVKYKGHWDFMTDVAKQNR 292
Db 147 VYLNKN--IDIK--NNIVLFGPDGYLYYKGPSPKELPS--EKITYGTWYDVT--AMEKOR 202

Qy 293 FSEVKENLQAGRYYGASSKDEYNRLLTDEKKNPERYNG--EYGHSEFTVNFKDKLTGE 350
Db 203 F-EGLSAAGDKSGALSALLEGVL---RQAEASSGHTDFGMTSEPEVDFSDTKTKGT 257
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Qy		351	LFSN---	LQDSRKGWTKTRYDIDANITYGNRFPGSATADKABASIKTHKPFTSDAKNSL	407
Dd	:	258	LYRNRIITQNSENKQIKTRTYIQATILHNRFGFKALAADKG-ATNGSHPPFISDS-	DSL	315
Qy	:	408	EGGFYGPNAEELAGFLNDINKLFCVFCAKESK-----AGEKTEAILDAYALGTFNKV	461	
Dd	:	316	EGGFYGPKEELAGFLPNDNDKNVAAFCAKQKKROGENAAGPAPE-VI DAYRI-----	368	
Qy	:	462	NATFTTFFPKQLDNFGNAKLVLVGSTVIDLPVTGVTKVDNEFTKNKPD SATNKA GETLM	521	
Dd	:	369	---TGEEFPKKEQIDSPGDVKLLVDGVLSLLP-----SEGNKAAPQHE	409	
Qy	:	522	VNDKVS V K T Y G Y G R N F E Y L K F G E S V G T S N S V F I Q G B T A T T G E K A V P T K G T A K Y I G N W V	581	
Dd	:	410	I-EQNGKVATVCCSNLDYMSFGKLSKENKDMMFLQGVRTPVS-DVAARTEANNKYRGTWY	467	
Qy	:	582	GXI---TGDKSSKSFEAQDVADFDIDEKKSVMGKLTTKDRODPVFNITCDIAGNGWTG	638	
Dd	:	468	GVIANGTSWSGEASNOEGENRAEPDPVFSTKKISGTUTAKDRTPSPATITAMIKDNGFSG	527	
Qy	:	639	KASTTKADAGGYKIBOSSSTGKSIVIK-DAEVTGGFYGPNANEMGGSFTH-----NTDDSK	692	
Dd	:	528	VAKTGE---NGPALDPQNTGNSHYTHIEATVSGGFYGKNALEMGGSFPFCNAPPEGKQEK	584	
Qy	:	693	ASVVFCTKRQEYVK	706	
Dd	:	585	ASVVFCAKFOOLWO	598	

RESULT 31

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000001 51
US-08-474-671-97
; Sequence 97, Application US/08474671
; Patent No. 6008326
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/474,671
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973

```

```

; REFERENCE/DOCKET NUMBER: 1038-465 MIS:vg
;
; TELECOMMUNICATION INFORMATION:
;
; TELEPHONE: (416) 595-1155
;
; TELEFAX: (416) 595-1163
;
; INFORMATION FOR SEQ ID NO: 97:
;
; SEQUENCE CHARACTERISTICS:
;
; LENGTH: 598 amino acids
;
; TYPE: amino acid
;
; STRANDEDNESS: single
;
; TOPOLOGY: linear
;
US-08-474-671-97

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Query Match	22.6%	Score 833.5	DB 3	Length 598
Best Local Similarity	34.7%	Pred. No. 1e-48		
Matches	234	Conservative 98	Mismatches 213	Indels 129
Gaps	28			
Qy	63	GGTNSGTGSANT-----PEPKYKDVPDNDKKNKDEVSIGIQEPAMCYGMAKSMNLH-----	112	
Db	24	GGGSFDLDSVETVODMHKSKPKYBDEKSPQSQQDVNSNGAAYGFAVKLPRRNAHFNPKY 83		
Qy	113	KQODTPLDDEKDIITLDGKQVAKGEKSPLPFSLLDVENKLLDGYIAKMEADKNAIGDRIK 172		
Db	84	KEKHPLGSMW-----WKLQRGB-PNSFS-----E 108		
Qy	173	KDNKDKSLSKAEIAKQIKEDVRKSHPEQQVLSSLNKIKFHSNDGTTKATTRDLOQVDYGY 232		
Db	109	RDELEKKRGSSELTSIESKWEDQ-----SRVV-----GYTNFT-----VYRSGY 146		
Qy	233	YLVDNGNLYIVTKDELWNLWLGVGGVFYNGTTTAKELPTQDAVKYKGHWFMTVAKQNR 292		
Db	147	VYLNKNN-IDIK-NNIVFLPGDGLYYIKGPKSKEUPS-EKITIKGTWDIVTD-AMEKQR 202		
Qy	293	FSEVKENLOAGRYVYGASSKDEYNRLITDEKNKPERVNG--EYGHSSSEFTVNFKDKKLIGE 350		
Db	203	F-EGLSAAGGDKSGALSALLEGVL-----RNQAEASSGHTDFGWTSEFFVDFSDKTIKGT 257		
Qy	351	LFSN---LQDSRKGNVTKRYRIDANIYGNRPRGSATADKABASKYKHPFTSDAKNSL 407		
Db	258	LYRNRNITQNNSENKQIKTRYTITQATLHGHRPGKALADKG-ATNGSHPFIDS-DSL 315		
Qy	408	EGGPGYGNABELAGKFLTNDKLGFGVFGAKRESK-----AGEKTEAILDVALGTENKN 461		
Db	316	EGGYPGKGBELAGKFLUSDNKVAAPGAKQKQKQGENAAGPATE-VIDAYRI-----368		
Qy	462	NATTFPTFKKLDNFGNAKKLVLGSTVVIDLVPTGVTKVDVNEFTKPKPDSATNKAGETLM 521		
Db	369	---TGEEFFKEQIDSFGDVKKLLVDGVELSILP-----SEGKKAAPQHE 409		
Qy	522	VNDKVSVKTYGYGNFYLPKFGELSVGTSNSVFLQBERTATTEKAVPTKGTAKYLGWV 581		
Db	410	I-EQGVKATVCCSNLDYMSFGKLSKENKODMFLQGVRTFVS-DVAARTEANAKYRGTWY 467		
Qy	582	GYI---TGKDDSKSFNEAQVADPIDFEKSKYVKGLTTKDRQDPVFNITGDIAGNGWTG 638		
Db	468	GYIANGTSWGEASNBQEGGNRAEFDVDFSTYKISGLTAKDRTPSPARTIATMKDNGFSG 527		
Qy	639	KASFTTKADAGYKIDSSSTGKSIIVIK-DAEVTGGFYGNANEMGGSFTH-----NTDSDK 692		
Db	528	VAKTGE---NGFALDPQNTGNSHYTHTEATVSGGFYGNALIEMGGSFSPFGNAPEGKQEK 584		
Qy	693	ASVVFGTKRQEEVK 706		
Db	585	ASVVFGAKRQOLVO 598		

RESULT 32
US-08-483-577A-97
; Sequence 97, Application US/08483577A
; Patent No. 6015688
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schreivess, Anthony


```

; REFERENCE/DOCKET NUMBER: 1038-720
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-897-438-97

Query Match      22.6%; Score 833.5; DB 3; Length 598;
Best Local Similarity 34.7%; Pred. No. 1e-48;
Matches 234; Conservative 98; Mismatches 213; Indels 129; Gaps 28;

Qy 63 GGTNSGTGSANT-----PEPKYKDVPTDENKDKRVSGIQBPAMGYGMALSKMNLH----- 112
Db 24 GGSFDDLSVETVQDMHSPKPYEDEKSPQSDVSENSGAAYGFAVKLPRNAHFPKY 83
Qy 113 KQDTPFLDEKDIITLDGKKQVAKGKSPLPFSLDVENKLLDGYIAKNNEADKNAIGDRIK 172
Db 84 KEKHPLGSM-----WKKLQGE--PNSFS-----E 108
Qy 173 KDNKDKSLSAEALAKQIKEDVRKSHFQQVLSLKNKIFHSNDGTTKATTRDLOVYDGY 232
Db 109 RDELEKRGSELTESKWEDQ-----SRVY-----GYTNFT-----YVRSY 146
Qy 233 YLVNDGNYLTKTDELNNLGPVGVYNGTTTAKELPTQDAVKYKGHWDMFTDVAKQNR 292
Db 147 VYLKNN-IDIK-NNIVLFGPDGLYKKEPKSPLPS-EKITYKGTWYVD-AMEKQR 202
Qy 293 FSEVKENLQAGRYYGASSKDEYNRLLTDEKNKPERYNG--EYGHSSSEFTVNFKDKLTGE 350
Db 203 F-EGLSAAGDKSGALSALAEGLV-----RQAEASSGHTDFGWTSEFVDFSDTKTGT 257
Qy 351 LFSN---LQDSRKGNTVTKRYDIDANIYNNRFRGSATAGKABASKTKHPFTSDAKNSL 407
Db 258 LYRNNRITQNNSENKQIKTRYTIQATLHGNRFGKALADKG-ATNGSHPPFISDS-DSL 315
Qy 408 EGGYFGNAEELAGKFLTDNKLFGVGAKEKRESK-----AGEKTEAILDAYALGTGNK 461
Db 316 EGGYFGPKEELAGKFLSDNKNKVAAVFGAKQKDKGKGENAAGPATE-VIDAYRI----- 368
Qy 462 NATTFPTFKQLDNFGNAKLLVLSGTVIDLVPVTGVTKDVNEFTKNKPDGATNKAETLM 521
Db 369 ---TGEEFKQIDUSFGDKLLVDGVELSLP-----SEGNKAAEQHE 409
Qy 522 VNDKSVKTYGYGRNFYLYKFGELSVGTSNSVFLQGERATATGKAVPTKGTAKYLGWV 581
Db 410 I-EQNGVKATVCCSNLDYMSFGKLSKENKDDMFLOQVTRTPVS-DVAARTEANAKYRGTY 467
Qy 582 GYI---TKDSSKSFNEAQDVADFDIDPEKSVKGLTKTKDRQDPVFNITGDIAGNWTG 638
Db 468 GYIANGTSWSGEASNGGNNRAEFDVDFSTKISGTLTAKDRTPAFPTITAMIKDNGFSG 527
Qy 639 KASTTKADAGYKIDSSSTGKSIK-DAEYTGFGYFGPNANEMGSGPTH-----NTDSDK 692
Db 528 VAKTGE---NGFALDPQNTGNSHYTHIATVSGGYFGKNALEMGGSFPGNAPEGKQEK 584
Qy 693 ASVVFGTKRQBEVK 706
Db 585 ASVVFGAKRQLVQ 598

RESULT 34
US-08-637-654-97
; Sequence 97, Application US/08637654
; Patent No. 6358727
; GENERAL INFORMATION:
; APPLICANT: Loomore, Sheena M
; APPLICANT: Harkness, Robin E
; APPLICANT: Schryvers, Anthony B

```

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; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew D
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: HAEMOPHILUS TRANSFERRIN RECEPTOR GENES
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/637,654
; FILING DATE: 05-AUG-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/CA94/00616
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-595
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-637-654-97

Query Match      22.6%; Score 833.5; DB 3; Length 598;
Best Local Similarity 34.7%; Pred. No. 1e-48;
Matches 234; Conservative 98; Mismatches 213; Indels 129; Gaps 28;

Qy 63 GGTNSGTGSANT-----PEPKYKDVPTDENKDKRVSGIQBPAMGYGMALSKMNLH----- 112
Db 24 GGSFDDLSVETVQDMHSPKPYEDEKSPQSDVSENSGAAYGFAVKLPRNAHFPKY 83
Qy 113 KQDTPFLDEKDIITLDGKKQVAKGKSPLPFSLDVENKLLDGYIAKNNEADKNAIGDRIK 172
Db 84 KEKHPLGSM-----WKKLQGE--PNSFS-----E 108
Qy 173 KDNKDKSLSAEALAKQIKEDVRKSHFQQVLSLKNKIFHSNDGTTKATTRDLOVYDGY 232
Db 109 RDELEKRGSELTESKWEDQ-----SRVY-----GYTNFT-----YVRSY 146
Qy 233 YLVNDGNYLTKTDELNNLGPVGVYNGTTTAKELPTQDAVKYKGHWDMFTDVAKQNR 292
Db 147 VYLKNN-IDIK-NNIVLFGPDGLYKKEPKSPLPS-EKITYKGTWYVD-AMEKQR 202
Qy 293 FSEVKENLQAGRYYGASSKDEYNRLLTDEKNKPERYNG--EYGHSSSEFTVNFKDKLTGE 350
Db 203 F-EGLSAAGDKSGALSALAEGLV-----RQAEASSGHTDFGWTSEFVDFSDTKTGT 257
Qy 351 LFSN---LQDSRKGNTVTKRYDIDANIYNNRFRGSATAGKABASKTKHPFTSDAKNSL 407
Db 258 LYRNNRITQNNSENKQIKTRYTIQATLHGNRFGKALADKG-ATNGSHPPFISDS-DSL 315
Qy 408 EGGYFGNAEELAGKFLTDNKLFGVGAKEKRESK-----AGEKTEAILDAYALGTGNK 461
Db 316 EGGYFGPKEELAGKFLSDNKNKVAAVFGAKQKDKGKGENAAGPATE-VIDAYRI----- 368

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QY 462 NATTTPTTKKOLDNFGNAKLVLGSTVIDLVPVTGTVKDVNEFTKKNKPDSPATNKAGETLM 521
DB 369 ---TGEEFKKEQIDSGVDKVLVDGVELSLP-----SEGNKAAPQHE 409
QY 522 VNDKSVKTYGYGRNFEYLKFGELSVGTSNSVFLQERTATTGEXAVPTKGTAKYLGWV 581
DB 410 I-EQGVKATVCCSNLDYMSFGKLSKENKDDMLQGVRTPVSDVAARTEANAKYRGTWY 467
QY 582 GYI---TGKDSKSFNEAQDVADFDIDPEKSKVKGKLTTKDQDPVFNITGDIAGNGWTG 638
DB 468 GYIANGTSWSGEASNOEGGNRAEFVDVFTSKKISGTLTAKDRTSPAFITAMIKDNGFSG 527
QY 639 KASTTKADAGGYKIDSSSTGKSIVIK-DAEVTGGYFGPNANEMGGSFTH-----NTDSDK 692
DB 528 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGGYGKNAIEMGGSFSPGNAPGKQEK 584
QY 693 ASVVFGRQEEVK 706
DB 585 ASVVFGRQQLVQ 598

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RESULT 35

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US-08-649-518-97
; Sequence 97, Application US/08649518
; Patent No. 6361779
; GENERAL INFORMATION:
; APPLICANT: Loomsore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 160
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/649,518
; FILING DATE: 17-MAY-1996
; CLASSIFICATION: 536
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/483,577
; FILING DATE: 07-JUN-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-608
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:

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```

; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-649-518-97

Query Match 22.6%; Score 833.5; DB 3; Length 598;
Best Local Similarity 34.7%; Pred. No. 1e-48;
Matches 234; Conservative 98; Mismatches 213; Indels 129; Gaps 28;

QY 63 GGTNSGTGSANT-----PEPKYKDVPTDENKDKDEYSGIQEIPAMGYGMALSKNHL----- 112
DB 24 GGSFOLDVETQDMHSPKPYEDEKSPQSQDVSNSGAAYGPAVKLPRNAHFNPKY 83
QY 113 KQDTPLDKDIITLDGKKQVAKGKSPPLPSLDVENKLLDGYIAKNEADKNAIGDRIK 172
DB 84 KEKHPGLSMD-----WKKLQGE--PNSFS-----E 108
QY 173 KDNKDKSLSKAELAKQIKEDVRSKSHFQOVLSSLKKNKIFHSNDGTTKATTRDLQVVDYGY 232
DB 109 RDELEKKGSSSELIESKWEDQ-----SRVV-----GYTNT-----YVRSGY 146
QY 233 YLVNDGNYLTVKTDLWNLGPGVGVYNGTITTAKELPDQDAVKYKGHWDFMTDVAQQRNR 292
DB 147 VYLNKNN-IDIK-NNIVLFGPDGYLYYKKGKPSKELPS-EKITYKGTWYVD-AMEKOR 202
QY 293 FSEVKENLQAGYYGASSKDBYNNLLTDEKKNKPERYNG--EYHSSSEPTVNFKKLGTGE 350
DB 203 F-EGLGSAAGDKSGALSALBEGVL---RQABASSGHTDFGMTSEPEVDFSDKTIKGT 257
QY 351 LFSN---LQDSKGNVTTKRYDIDANIYGNRFRGSATASDKABASKTKHPTSDAKNSL 407
DB 258 LYRNNRITQNNSENKQIKTRYITQATLHGNRFGKALADKG-ATNGSHHPFISDS-DSL 315
QY 408 EGGFYGPNAELAGKFLTNKDLFGVFGAKRESK-----AGEKTEALDVALGTFNKN 461
DB 316 EGGFYGPKELAGKFLSNKVAVFGAKQKDKDGENAAGPATE-VIDAYRI----- 368
QY 462 NATTTPTTKOLDNFGNAKLVLGSTVIDLVPVTGTVKDVNEFTKKNKPDSPATNKAGETLM 521
DB 369 ---TGEEFKKEQIDSGVDKVLVDGVELSLP-----SEGNKAAPQHE 409
QY 522 VNDKSVKTYGYGRNFEYLKFGELSVGTSNSVFLQERTATTGEXAVPTKGTAKYLGWV 581
DB 410 I-EQGVKATVCCSNLDYMSFGKLSKENKDDMLQGVRTPVSDVAARTEANAKYRGTWY 467
QY 582 GYI---TGKDSKSFNEAQDVADFDIDPEKSKVKGKLTTKDQDPVFNITGDIAGNGWTG 638
DB 468 GYIANGTSWSGEASNOEGGNRAEFVDVFTSKKISGTLTAKDRTSPAFITAMIKDNGFSG 527
QY 639 KASTTKADAGGYKIDSSSTGKSIVIK-DAEVTGGYFGPNANEMGGSFTH-----NTDSDK 692
DB 528 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGGYGKNAIEMGGSFSPGNAPGKQEK 584
QY 693 ASVVFGRQEEVK 706
DB 585 ASVVFGRQQLVQ 598

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RESULT 36

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US-07-961-522-4
; Sequence 4, Application US/07961522
; Patent No. 5417971
; GENERAL INFORMATION:
; APPLICANT: POTTER, ANDREW A.
; APPLICANT: GERLACH, GERALD F.
; APPLICANT: WILLSON, PHILIP J.
; APPLICANT: ROSSI-CAMPOS, AMALIA
; TITLE OF INVENTION: VACCINES FOR ACTINOBACILLUS
; TITLE OF INVENTION: PLEUROPNEMONIAE
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROBERTA L. ROBINS

```

```
STREET: 635 BRYANT STREET
CITY: PALO ALTO
STATE: CALIFORNIA
COUNTRY: UNITED STATES OF AMERICA
ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/961,522
FILING DATE: 19921015
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 9000-0015.20
TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: AMINO ACID
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-961-522-4

Query Match      22.6%; Score 832.5; DB 1; Length 593;
Best Local Similarity 31.1%; Pred. No. 1.2e-48;
Matches 228; Conservative 101; Mismatches 232; Indels 171; Gaps 24;

Qy 3 HIPLTTLCLVAISAVLLTACGSGGSGNPPATPIPNASGSGNTGNTGNAGGTDNTANAGNT 62
Db 2 HFKLNPAALFTSLFVACSGGKGSFLEDRV-PNQ-----ETQLLRNKAPKTETGE--KENERVVELSE 36
Qy 63 GGTNSGTSANTPEPKYKDVPTDENKKDVEVSGIOEPAMGYCMALSKMNLHKQDTPLEK 122
Db 37 -----TAKAEKATTSYQDEETKKTKEELDCLMEPALGY-----ETQLLRNKAPKTETGE--KENERVVELSE 70
Qy 123 DIITLDGKKQVAKGKESPLPFSLDVENKLLDGYIAKNEADKNAIGRIKDKNDKSLK 182
Db 71 -----ETQLLRNKAPKTETGE--KENERVVELSE 98
Qy 183 AELAKQIKEDVRKSHFQQVL--SSLKNI FHSNDGTTKATTRDLOYDYGYLVNDGNYL 241
Db 99 DKITKLYQESVEIIPHLDELNGKTTSDVYHSHDSKRLDKNRDLKYVRSGY--VYDGSFN 156
Qy 242 TVKTDE---LWNLPVGGVFPYNGTTAKELPTQDAVKYKGHPDFTDVAQRNRFSEVK 297
Db 157 EIRNDSGFHVKQIGIDGYVYLGVTFSKELPKGKVISYKGTWDFVSNINLER-----EID 212
Qy 298 --ENLQAGRYGASSKDEYNRLLTDEKNKPERYNGEYG-----HSSEFTVNFDDKKL 347
Db 213 GFDTSGDGKNVSAIS-----ITETVNRDHKVGKLGDNVEKGVASHSSEFAVDNDKKL 265
Qy 348 TGEIPLSNLQDSRKGNVTTKRYDIDANIYGNRFRGSATASDKABASKTQHPFTSDAKNSL 407
Db 266 TGSLYRNGYINRNKAQEVTKRYSIEADIAGNRFRG-----KAKAEKAGDPIFTDS-NYL 318
Qy 408 EGGYVGNABELAGKFLTNDKLVGVFGAKESKAGE-KTEAILDAYALGTFNKNNTTF 466
Db 319 EGGYVGAEEAGKFFTNKSLFAVFAAKSEN--GETTTERRIDATKI-----DL 367
Qy 467 TPFTKQLDNLDFGNAKVLGLSTVIDLVPTGVTQKDVNEFTKPKDPSATNKAAGETILMVDKV 526
Db 368 TQFNAKELNNGFDASVLIIDQKIDLA-----GVNFKSKTVEINGKT 410
Qy 527 SVKTYGYGRNPEYIKFGBEL-----SVGTSNSVFLQGERTATTGKAVPTKGTAKYLGW 580
Db 411 MV-AVACCNSNLEYMKFGQLWQEGKQQVKDKNLSLFLQGERTAT---DKMPAGGNYKYVGTW 466
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Qy 581 -----VGYITGKSSSFNEAQDVADFDIDFEKSKSVKGLTKTKORDPVPFNITGDIAG 633
Db 467 DALVSKGTNWAERADNR---ESGYRTEFDVNFSDKKVNGKLPDKGGVNPVFTVDATING 523
Qy 634 NGWTGKASTTKADAGGYKIDS-SSTGKSIIVIKAEVTTGGFYGPANEMGSGFTHTDDSK 692
Db 524 NGFTGSAKTSDS---GFPALDAGSSQHGNVFSDIKVNNGFYGPTAGBLGQFHHSKSDNGS 580
Qy 693 ASVVFGTKROEE 704
Db 581 VGAUVGAKRQIE 592

RESULT 37
US-08-217-438-4
; Sequence 4, Application US/08217438
; Patent No. 5521072
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Gerlach, Gerald F.
; APPLICANT: Willison, Philip J.
; APPLICANT: Rossi-Campos, Amalia
; TITLE OF INVENTION: ACTINOBACILLUS PLEURODNEIMONIAE
; TRANSFERIN BINDING PROTEINS AND USES THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Reed & Robins
; STREET: 635 Bryant Street
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/217,438
; FILING DATE: 22-MAR-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Robins, Roberta L.
; REGISTRATION NUMBER: 33,208
; REFERENCE/DOCKET NUMBER: 9001-0015.01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-617-8999
; TELEFAX: 415-327-3231
; TELEX:
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-217-438-4

Query Match      22.6%; Score 832.5; DB 1; Length 593;
Best Local Similarity 31.1%; Pred. No. 1.2e-48;
Matches 228; Conservative 101; Mismatches 232; Indels 171; Gaps 24;

Qy 3 HIPLTTLCLVAISAVLLTACGSGGSGNPPATPIPNASGSGNTGNTGNAGGTDNTANAGNT 62
Db 2 HFKLNPAALFTSLFVACSGGKGSFLEDRV-PNQ-----TAKAEKATTSYQDEETKKTKEELDCLMEPALGY----- 36
Qy 63 GGTNSGTSANTPEPKYKDVPTDENKKDVEVSGIOEPAMGYCMALSKMNLHKQDTPLEK 122
Db 37 -----TAKAEKATTSYQDEETKKTKEELDCLMEPALGY----- 70
Qy 123 DIITLDGKKQVAKGKESPLPFSLDVENKLLDGYIAKNEADKNAIGRIKDKNDKSLK 182
Db 71 -----ETQLLRNKAPKTETGE--KENERVVELSE 98
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Qy 183 AELAKQIKEDYRKSHFEQOVL--SSLKNKI FHSNDGTTKATTRDLQYVDYGYLVNDGNL 241
Db 99 DKITKLYQESVEIIPHLDELNGKTTSDNVVSHSDSKRLDKNRDLKYVRSGY--VYDGSFN 156
Qy 242 TVKTDE----LWNLGPGVGVFYNGTTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVK 297
Db 157 EIRNDSGFHFVKQIDGVVYVLTGTPSKLPKGVISYKGTWDFVSNINLER----EID 212
Qy 298 --ENLQAGRYGASCKDEYNRLLTDEKNKPRYNGEY--SVGTSNSVFLQERTATTGKAVPTKGTAKYLGW 347
Db 213 GFDTSGDGKNSATS-----ITETVNRDHKVGKLGDNVKGVAHSEFAVDFDNKL 265
Qy 348 TGEFSLNLDGRKGNVTTKRYDIDANIYGNRFRGSATASDKAASKTKHPFTSDAKNSL 407
Db 266 TGSLYRNGYINRNKAQEVTKRYSIEADIAGNRFRC-----KAKAEKAGDPIFTDS-NYL 318
Qy 408 EGGFYGPNAEBELAGKFLTNNDKLFVFCAKRESKAGE-KTEAILDAYALGTGTFNKNNAFTF 466
Db 319 EGGFYGPNAEBELAGKFLTNNDKLFVFCAKRESKAGE-KTEAILDAYALGTGTFNKNNAFTF 466
Qy 467 TPFTKQOLDNFGNAKLVLGSTVIDLPTGVTGKDVNEFTKNKPD SATNKAGETLMVNDKV 526
Db 368 TOFNAKELNFGDASVLIIDGQKIDLA-----GVNPKNSKTVEINGKT 410
Qy 527 SVKTYGYGRNFEYLKFGEL-----SVGTSNSVFLQERTATTGKAVPTKGTAKYLGW 580
Db 411 MV-AVACCSNLEYMKFQWQKEGKQVKNLSLFLQERTAT---DKMPAGGNYKYGTW 466
Qy 581 -----VGYITGKDSKSFNEAQDVADFDIDFEKSVKGLTKTKDRQDPVFNITGDIAG 633
Db 467 DALVSKGTNWIABADNR---ESGYRTEFDVNFSDKKVNGKLPDKGGVNPVFTVDATING 523
Qy 634 NGWTGKASTTKADAGGYKIDS--SSTGKSIVIKDAEVTGGFYGPNAEMGGSFTHTDSDK 692
Db 524 NGFTGSAKTSDS---GPDALDAGSSQHGNAVFSDIKVGNGFGYPTAGELGGQFHHSKSDNGS 580
Qy 693 ASVVFPGTKROEE 704
Db 581 VGAVFGAKRQIE 592

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RESULT 38

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US-08-217-438-5
; Sequence 5, Application US/08217438
; Patent No. 5521072
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Gerlach, Gerald F.
; APPLICANT: Willison, Philip J.
; APPLICANT: Rossi-Campos, Amalia
; TITLE OF INVENTION: ACTINOBACILLUS PLEUROPEINOMITAE
; TITLE OF INVENTION: TRANSFERRIN BINDING PROTEINS AND USES THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Reed & Robins
; STREET: 635 Bryant Street
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/217,438
; FILING DATE: 22-MAR-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Robins, Roberta L.
; REGISTRATION NUMBER: 33,208

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; REFERENCE/DOCKET NUMBER: 9001-0015.01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-617-8999
; TELEFAX: 415-327-3231
; TELEX:
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-217-438-5

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Query Match 22.6%; Score 832.5; DB 1; Length 593;
Best Local Similarity 31.1%; Pred. No. 1.2e-48;
Matches 228; Conservative 101; Mismatches 232; Indels 171; Gaps 24;
Qy 3 HIPLTLLCAISAVLLTACGGSGSNPPAPPIPNASGSGNTGNTGNAGGTDNTANAGNT 62
Db 2 HFKLNPAALAFSLFVACSGGKGFLEDRV-PNQ----- 36
Qy 63 GGTNSGTGSANTPEPKYKDVPTDENKKDEVSGIOEPAMGYGMALSKMNLHKQDTPLEDEK 122
Db 37 -----TAKAEKATTSYODEETKKTKBEELDKLMEPALGY----- 70
Qy 123 DIITLDGKKQVAKGEKSPLPFSLDVENKLLDGYITAKNEADKNAIGDRIKKDKDKSLSK 182
Db 71 -----ETQILRRNKAPKTETGE--KNERVVEUSE 98
Qy 183 AELAKQIKEDYRKSHFEQOVL--SSLKNKI FHSNDGTTKATTRDLQYVDYGYLVNDGNL 241
Db 99 DKITKLYQESVEIIPHLDELNGKTTSDNVVSHSDSKRLDKNRDLKYVRSGY--VYDGSFN 156
Qy 242 TVKTDE----LWNLGPGVGVFYNGTTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVK 297
Db 157 EIRNDSGFHFVKQIDGVVYVLTGTPSKLPKGVISYKGTWDFVSNINLER----EID 212
Qy 298 --ENLQAGRYGASCKDEYNRLLTDEKNKPRYNGEY--SVGTSNSVFLQERTATTGKAVPTKGTAKYLGW 347
Db 213 GFDTSGDGKNSATS-----ITETVNRDHKVGKLGDNVKGVAHSEFAVDFDNKL 265
Qy 348 TGEFSLNLDGRKGNVTTKRYDIDANIYGNRFRGSATASDKAASKTKHPFTSDAKNSL 407
Db 266 TGSLYRNGYINRNKAQEVTKRYSIEADIAGNRFRC-----KAKAEKAGDPIFTDS-NYL 318
Qy 408 EGGFYGPNAEBELAGKFLTNNDKLFVFCAKRESKAGE-KTEAILDAYALGTGTFNKNNAFTF 466
Db 319 EGGFYGPNAEBELAGKFLTNNDKLFVFCAKRESKAGE-KTEAILDAYALGTGTFNKNNAFTF 466
Qy 467 TPFTKQOLDNFGNAKLVLGSTVIDLPTGVTGKDVNEFTKNKPD SATNKAGETLMVNDKV 526
Db 368 TOFNAKELNFGDASVLIIDGQKIDLA-----GVNPKNSKTVEINGKT 410
Qy 527 SVKTYGYGRNFEYLKFGEL-----SVGTSNSVFLQERTATTGKAVPTKGTAKYLGW 580
Db 411 MV-AVACCSNLEYMKFQWQKEGKQVKNLSLFLQERTAT---DKMPAGGNYKYGTW 466
Qy 581 -----VGYITGKDSKSFNEAQDVADFDIDFEKSVKGLTKTKDRQDPVFNITGDIAG 633
Db 467 DALVSKGTNWIABADNR---ESGYRTEFDVNFSDKKVNGKLPDKGGVNPVFTVDATING 523
Qy 634 NGWTGKASTTKADAGGYKIDS--SSTGKSIVIKDAEVTGGFYGPNAEMGGSFTHTDSDK 692
Db 524 NGFTGSAKTSDS---GPDALDAGSSQHGNAVFSDIKVGNGFGYPTAGELGGQFHHSKSDNGS 580
Qy 693 ASVVFPGTKROEE 704
Db 581 VGAVFGAKRQIE 592

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RESULT 39

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US-08-487-890A-100
; Sequence 100, Application US/08487890A

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Patent No. 5708149
GENERAL INFORMATION:
APPLICANT: Loosmore, Sheena
APPLICANT: Harkness, Robin
APPLICANT: Schryvers, Anthony
APPLICANT: Chong, Pele
APPLICANT: Gray-Owen, Scott
APPLICANT: Yang, Yan-Ping
APPLICANT: Murdin, Andrew
APPLICANT: Klein, Michel
TITLE OF INVENTION: Transferrin Receptor Genes
NUMBER OF SEQUENCES: 147
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,890A
FILING DATE: 07-JUN-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/175,116
FILING DATE: 29-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/148,968
FILING DATE: 08-NOV-1993
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-466 MIS:jb
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 100:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-487-890A-100

Query Match 22.6%; Score 832.5; DB 1; Length 593;
Best Local Similarity 31.1%; Pred. No. 1.2e-48;
Matches 228; Conservative 101; Mismatches 232; Indels 171; Gaps 24;

Qy 3 HIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNASGSGNTGNTNAGGTDNTANAGT 62
Db 2 HFKNLPYALFTSLFLVACSGGKSFDELYR-FNQ----- 36
Qy 63 GGTSGTGSANTPEPKYQDVPTDENKDEVSIOEPANGYGMALSKNHLKQDTPLEK 122
Db 37 -----TAKAEKATTSYQDEETKTKTEELDKLMEPALGY----- 70
Qy 123 DIITLDGKKVAKGKESPLPSLDVENKLLDGYIAKXNEADKNAIGDRICKDKKSLSK 182
Db 71 -----ETQLLRNKAPKTETGE--KXNRVVELSE 98
Qy 183 AELAKQIKEDVRKGHEFOQVL-SSLKXNKIPHSNDGTTKATTRDLQYDYDGYLLVNDGNYL 241
Db 99 DKITKLYQESVEIIPHLDELNGKTTSDNVYHSHDSKRLDKNRLKYVRSY--YVDGSFN 156
Qy 242 TVKTDE----LWNLPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVK 297
Db 157 EIRNDSGHFVFKQIDGYVYLYGVTPSKLPKGVISYKGTWDFVSNINLER----EID 212

298 --ENLAQRYYGASSKDEYNRLTDBKNKPERVNGEY-----HSSEFTVNFKDKKL 347
213 GFDTSGDGNVSATS-----ITETVNRDHKVGKGLGNEVKGVAHSSEFAVDFONKKL 265
348 TGFELPSNLQDSRGKNTKTKRYDIDANIYGNRRGSGATASDKAEASKTKHPFTSDAKNSL 407
266 TGSLYRNGYINRNKAQEVTKRYSIEADIAGNRFRG-----KAKAEKAGDPIFTDS-NYL 318
408 EGGFYGNPAEELAGKELTNDNKLFGVGAKEKSGAGE-KTEAILDAYALGTGFKNNATTF 466
319 EGGFYGPKAEEMACKFTTNKSLFAVPAKSEN--GETTTERIIDATKI-----DL 367
467 TPFTKKQLDNFGNAKKLVLGSTVIDLPVTGVTKDVNNEFTKNKPDPSATNKAGETLMVNDKV 526
368 TQFNAXELNFGDASVLIIDGOKIDLA-----GVNFKNKSKTVEINGKT 410
527 SVTYGYGRNFEYLKFGEL-----SVGTSNSVFLQERTATTGEKAVPTKGTAKYLGW 580
411 MV-AVACCNSLEYMKFGLWKQKQGVKQVKNLSLQERTAT--DKMPAGGNYKYVGTW 466
581 -----VGYITGKSSKSFNEADVDADFDIDPEKSVKGLTTKDRQDPVFNITGDIAG 633
467 DALVSKGTWIAEADNR---ESGYTEFDVNFSDKKVNGKLPDKGGVNFVFTVDATING 523
634 NGWTGKASTTKADAGYKIDS-SSTGKSIVIKDAVYTGFGYGNANEMGSGFTHTDTSK 692
524 NGFIGSAKTSDS--GFALDAGSSQHGNAVFSDIKVNGGFGYPTAGELGGQPHHKSNGS 580
693 ASVVFQTKQEE 704
581 VGAVFGAKRQIE 592

RESULT 40
US-08-321-978-4
Sequence 4, Application US/08321978
Patent No. 5801018
GENERAL INFORMATION:
APPLICANT: POTTER, ANDREW A.
APPLICANT: GERLACH, GERALD F.
APPLICANT: WILLSON, PHILIP J.
APPLICANT: ROSSI-CAMPOS, AMALIA
TITLE OF INVENTION: VACCINES FOR ACTINOBACILLUS
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: ROBERTA L. ROBINS
STREET: 285 HAMILTON AVE, SUITE 200
CITY: PALO ALTO
STATE: CALIFORNIA
COUNTRY: UNITED STATES OF AMERICA
ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA: US/08/321,978
FILING DATE: 12-OCT-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 9001-0015.02
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 327-3400
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
STRANDEDNESS: single

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; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-321-978-4

Query Match      22.6%; Score 832.5; DB 1; Length 593;
Best Local Similarity 31.1%; Pred. No. 1.2e-48;
Matches 228; Conservative 101; Mismatches 232; Indels 171; Gaps 24;

Qy 3 HIPLTLCVAISAVLLTACGSGGSGNPAPPTPIPNASGSGNTGNTGAGGTDNTANAGNT 62
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
2 HFKNLPYALAFSLFLVACSGGKGFLELVR-PNQ----- 36

Qy 63 GGTNSGTGSANTPEPKYKDVPTDENKKDEVSIGIOEPAMGYGMALSKMNLHKQDTPLEK 122
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
37 -----TAKAEKATTSYODEETKKTKRELDKLMPEALGY----- 70

Qy 123 DIITLDGKKQVAKGKSLPFLSDVENKLLDGYIAKMEADNAIGRIKDNKDKSLSK 182
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
71 -----ETQILRRNKAPKTETGE--KENERVVELSE 98

Qy 183 AELAKQIKEDYRKSHPEQOVL-SSLKNKI FHSNDGTTKATTRDLQYVDYGYLVNDGNYL 241
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
99 DKITKLYQESVEIIPHLDELNGKTTSDNVYHSHDSKRLDKNRDLKYVRSGY--VYDGSFN 156

Qy 242 TVKTDE---LWNLPVGVGVNGTTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVK 297
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
157 EIRNDSGFHFVKQIDGYVYLGVPFSKELPKGVISYKGTWDFVSNINLER----EID 212

Qy 298 --ENLQAGRYYCASSKDEYNRLLTDEKNKPERYNGEV-----HSSEFTVNFKDKKL 347
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213 GFDTSGGDKNVSAT-----IETVNRDHKVGKLGDNVEKGVASHSEFAVDFDNKKL 265

Qy 348 TGEIPLNQDSRKGNVTKRYDIDANIYGNRPRGSATASDKABASKTKHPFTSDAKNSL 407
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
266 TGSLYRNGYINRNKAQEVTKRYSIEADIAGNFRG-----KAKAEKAGDPIFTDS-NYL 318

Qy 408 EGGFYGPNAELACKFLINDNKLFCVFGAKESKAGE-KTEAILDAYALGTFNKNNTTF 466
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
319 EGGFYGPNAEEMAGKFFTNKSLFAVFAAKSEN--GETTTERIIDATKI-----DL 367

Qy 467 TPFTTKQLDNFGNAKKLVLGSLVLDLPTGVTKDVNFTKNKPDPSATNKAGETILMVNDKV 526
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368 TQFNAKELNFGDASVLIIDGQKIDLA-----GVNPFKNSKTVEINGKT 410

Qy 527 SVKTYGYGRNPEYLKFGEL-----SVGTSNSVFLQERTATTGEKAVPTKGTAKYLGW 580
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
411 MV-AVACCSNLEVMKFGQWQEGKQKQVKDNSLFLQERTAT---DKMPAGGNYKYVGTW 466

Qy 581 -----VGYITGKDSKSPNEAQDVADFDIDFEKSVKGLTKDRQDPVFNITGDIAG 633
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
467 DALYSKGTNWIABADNNR---ESGYRTEFDYVNSDKKYNGLFDKGGVNPVFTVDATING 523

Qy 634 NGWTGKATTKADAGGYKIDS-SSTGKSIIVIKDAEVTGGFYGPANEMGGSFTHNTDTSK 692
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
524 NGFTGSAKTSDS---GFALDAGSSQHGNAVFSDIKVNGGFGYPTAGELGGQFHHKSDNGS 580

Qy 693 ASVVFGTKRQEE 704
Db 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
581 VGAVFGAKRQIE 592

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